NATIONAL EVALUATION OF THE MEDICARE COMPETITION DEMONSTRATIONS

SUMMARY REPORT

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I. INTRODUCTION

This report serves as a summary and synthesis of the major findings from the Medicare Competition Evaluation. As an introduction to these findings, this chapter presents a brief history of Medicare risk contracting and reviews the events that led to the Medicare Competition Demonstrations and, subsequently, to the Evaluation of the Medicare Competition Demonstrations.

A. HISTORY OF MEDICARE RISK CONTRACTING

Between the time the original Medicare legislation was enacted in 1966 and the present, Medicare has offered a number of different contracting options to Health Maintenance Organizations (HMOs) wishing to participate in the Medicare program. Initially, these options involved payment provisions that were based on the traditional benefit and cost-reimbursement philosophy of the original Medicare program; however, they have expanded and evolved over time in order to increase HMO participation in Medicare and to encourage beneficiary enrollment in prepaid plans.

Group Practice Prepayment Plans (now called Health Care Prepayment Plans) were authorized under the initial legislation to contract with the Medicare program for the prospective payment for Part B services (medical and other professional services). However, payment to plans with this type of contract, while prospective, was based on the projected costs of the plans and adjusted at the end of the year to equal 80 percent of reasonable costs.

The Social Security Amendments of 1972 expanded the options for prepaid plans by allowing HMOs to enter into either cost or "risk"-based contracts with Medicare for the provision of both Part A services (care provided by hospitals, nursing homes, or other institutions) and Part B services. Only HMOs that met all applicable Federal qualification requirements and had enrollments of at least 5,000 prepaid members were allowed to participate in these options. Under either option, reimbursement was provided through interim monthly capitation payments based on Medicare's estimate of the costs incurred by an HMO for providing services to its Medicare enrollees. For HMOs that chose the cost-reimbursement option, actual costs were calculated at the end of the contract period based on cost reports submitted by the HMOs. Like Group Practice Prepayment Plans, prior reimbursements to the plan were then adjusted to reflect allowable and reasonable costs. For HMOs choosing the risk option, the HMO's actual costs were compared with a retrospectively determined average adjusted per capita cost (AAPCC), which represented what HCFA's costs would have been for the enrollees if they had been in the fee-for-service system. Under this risk arrangement, HMOs could share in any savings, up to 10 percent of the AAPCC, but were required to absorb all losses.

By December 31, 1979 (14 years after the inception of the Medicare program), only 64 organizations, with a total enrollment of 521,894 beneficiaries, had signed contracts with the Medicare program. Thirty-one of these organizations were Group Practice Prepayment Plans (484,755 beneficiaries enrolled), thirty-one had cost contracts with Medicare

(42,766 beneficiaries enrolled), and one had a risk contract with Medicare, (19,268 beneficiaries enrolled).

Medicare's relative lack of success in attracting HMOs to participate in the program, particularly under the risk-based option, can be attributed to the fact that the contracting options offered by Medicare failed to provide HMOs with sufficient financial incentives, and the retrospective cost-based reimbursement and cost-finding procedures used by Medicare differed substantially from HMOs' usual procedures of relying on prospectively determined rates.

In order to test other methods of contracting that might increase HMO participation in the program, HCFA solicited interest in, and developed, a series of demonstration projects to test alternative forms of HMO risk contracting. The first of these demonstrations, the Medicare Capitation Demonstrations, tested various reimbursement models among eight HMOs that began operation between 1980 and 1981. Reimbursements to individual plans ranged from 85 percent to 95 percent of the AAPCC, and were linked to a number of risk-sharing arrangements.

B. THE MEDICARE COMPETITION DEMONSTRATIONS

Encouraged by the responses of both HMOs and beneficiaries to the initial demonstration, HCFA solicited HMO interest in a second demonstration entitled the Medicare Competition Demonstrations. Over 50 HMOs and competitive medical plans (CMPs) applied to participate. Since regulations were already being prepared to implement a national program that would permit HMOs and CMPs to enroll Medicare beneficiaries on a completely prepaid capitated basis, only 26 of these HMO/CMPs were

permitted to be a part of the Medicare Competition Demonstration[1]. Figure I.1 shows the geographical distribution of the demonstration HMOs. The first of these began operation in 1982; the majority, however, became operational during 1983 and 1984.

In these demonstrations, most participating plans agreed to accept full responsibility and financial risk for providing Medicare benefits. An exception to this was a group of plans belonging to the American Medical Care Review Association (AMCRA) that had a unique risk-sharing arrangement with AMCRA. All HMOs received, for each enrollee, a prospective monthly payment from HCFA equal to 95 percent of the AAPCC. At a minimum, the HMOs were required to provide the current Medicare benefit package. The HMO could provide benefits above this level and could charge a premium to enrollees. The HMOs retained full control over any "savings" generated. The demonstrations continued for periods ranging from nine months to two and a half years. All of them converted to program status under the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) between April 1, 1985, when TEFRA went into effect, and June 30, 1985. Under TEFRA, many of the regulations tested in the Medicare Competition Demonstrations and Medicare Capitation Demonstrations were put into effect on a permanent program basis.

C. THE EVALUATION OF THE MEDICARE COMPETITION DEMONSTRATION

In September 1983, Mathematica Policy Research, Inc. (MPR), and its principal subcontractor, Medical College of Virginia (MCV), were

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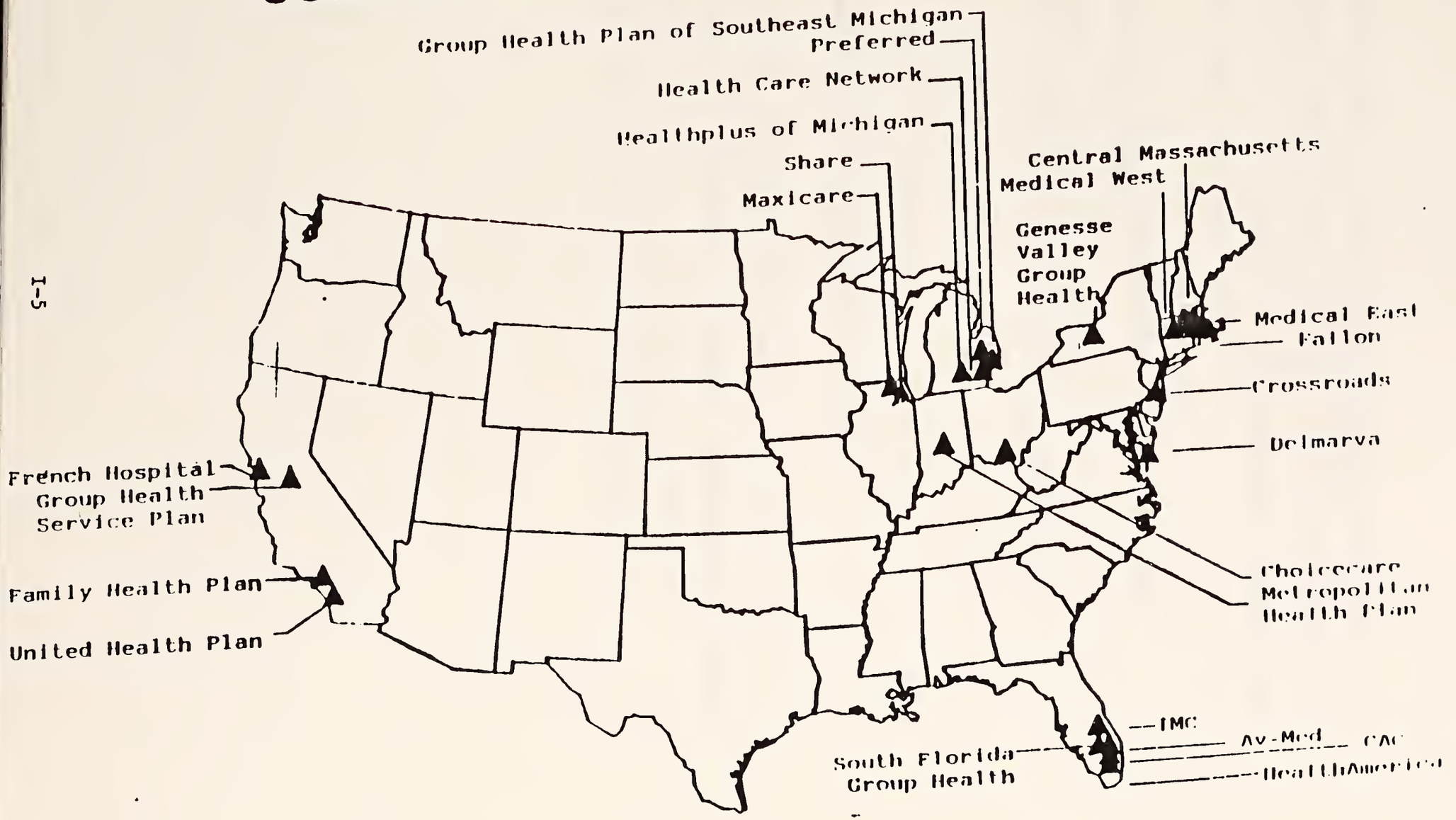
[1]Because CMPs differ from HMOs only to the extent that the former are not federally qualified, for the purpose of this report, any reference to the demonstration HMOs should be understood to include all of the HMOs and CMPs that participated in the Medicare Competition Demonstrations.

FIGURE I.1

GEOGRAPHICAL DISTRIBUTION OF MEDICARE COMPETITION DEMONSTRATION PLANS



awarded a contract by HCFA to undertake a comprehensive evaluation of the Medicare Competition Demonstrations. In order to assess the demonstration HMOs/CMPs experience in and effects on the Medicare market, the following specific elements were evaluated:

- the implementation and operational experiences of the participating HMOs,
- the HMOs' experiences in marketing their plans to Medicare beneficiaries and the factors that affected beneficiaries' decisions to join or not join an HMO,
- the extent to which enrollees were satisfied with the their choice of HMO,
- the quality of care provided by the plans, and
- the impact of the demonstration on Medicare beneficiaries' use and cost of services.

Each of these issues has been covered in detail in previous interim evaluation reports (see Appendix). This report summarizes and synthesizes the major findings from those interim reports and discusses the implications of these findings for the TEFRA program and future evaluations.

II. THREE YEARS OF MEDICARE HMO EXPERIENCE[1]

A. OVERVIEW

The 26 HMOs and CMPs that entered the Medicare market between 1982 and 1984 under the Medicare Competition Demonstrations were studied through year end 1986. Consequently, we were able to observe not only the effect that the demonstration HMOs (and TEFRA program) had on the Medicare market, but we also were able to document the process of HMO participation in the Medicare program over a two- to three-year period. This is a particularly important issue, since many of the analytic findings reported in subsequent sections of this report represent impacts at specific points in time. Our ongoing contact with these demonstration HMOs has revealed the dynamic nature of the HMO industry and the importance of recognizing that it is not sufficient to examine the implications of HMOs for the Medicare market by using a "snapshot" approach. HMOs will be continuing to change and refine their role in the health care market and in the Medicare component of that market. Our objective in this section is to present an overview of the

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[1]The research summarized in Chapter II is drawn from the following sources:

Langwell, K., et al. Report on the Implementation of the Medicare Competition Demonstrations, February 1986.

Langwell, K., et al. First Annual Report. Medicare and HMOs: A History and Review of Early Experience, November 1985.

Brown, R., et al. Second Annual Report: National Medicare Competition Demonstrations Evaluation, April 1987.

Rossiter, L., et al. Third Annual Report: National Medicare Competition Demonstrations Evaluation. May 1988.

directions that these 26 HMOs and CMPs took between 1982 and 1986 and to discuss the implications of these trends for the interpretation of the evaluation findings and for the future direction of the Medicare HMO program.

B. CHARACTERISTICS OF THE DEMONSTRATION HMOs AND CHANGES OVER TIME

The 26 HMOs and CMPs that entered the Medicare market under the demonstration program were not closely representative of the HMO industry. Table II.1 compares the organizational characteristics of the demonstration participants with the characteristics of all U.S. HMOs, for the years 1984 and 1986. Between 1984 and 1986, the number of HMOs in the United States grew from 306 to 595. The composition of the 1986 HMO group was substantially different from that in 1984, and markedly different from the composition of the demonstration group:

- HMOs participating in the demonstration were more likely to be Federally qualified in 1984 than were non-participating HMOs; by 1986, 92 percent of demonstration HMOs were Federally qualified, compared with 51 percent of all HMOs.
- Demonstration HMOs were much less likely to be for-profit than were all HMOs.
- Demonstration HMOs were more likely to be of the staff model organizational type and less likely to be IPAs than were all HMOs (between 1984 and 1986 the proportion of all HMOs that are IPAs increased substantially).

Thus, demonstration HMOs were not representative of all U.S. HMOs in 1984. By 1986, however, the differences between the characteristics of the demonstration HMOs and those of all HMOs became even more pronounced. Consequently, it may be inappropriate to make generalized statements about

TABLE II.1

ORGANIZATIONAL CHARACTERISTICS OF MEDICARE COMPETITION DEMONSTRATIONS AND ALL U.S. HMOs 1984 and 1986

	1984		1986	
	Demonstrations	All HMOs[a]	Demonstrations	All HMOs
Number	26	306	24[b]	595
Percent Federally Qualified				
Yes	80.8%	64.4%	91.7%	50.8%
No	19.2	36.6	8.3	49.2
Percent For-Profit				
Yes	23.1	n/a	33.3	58.5[c]
No	76.9	n/a	66.7	39.8
Percent Affiliated				
Yes	43.3	n/a	62.5	n/a
No	57.7	n/a	37.5	n/a
Model				
-- Staff	34.6	17.3	29.2	11.9
-- Group	15.4	22.9	16.7	14.5
-- IPA	38.5	41.2	29.2	58.0
-- Network/Mixed	11.5	18.6	25.0	15.6

[a]Information for all HMOs was taken from the June 1984 and June 1986 editions of the Interstudy reports.

[b]ChoiceCare and Delmarva terminated their risk-sharing contracts as of December 31, 1985.

[c]Only HMOs reporting a profit status are included.

the demonstration experience, without considering the implications of these differences.

While the HMOs and CMPs that entered the Medicare market under the Medicare Competition Demonstrations differed somewhat from HMOs that chose not to participate, over the next three years these HMOs experienced considerable organizational change. In addition, a number of plans withdrew from participation in the Medicare program by the end of 1986. Table II.2 summarizes the organizational characteristics of the Medicare Competition Demonstration HMOs in their first full year of operation and the changes that occurred in those characteristics by year end 1986. Several organizational changes that occurred among the participating HMOs between 1984 and 1986 are noteworthy:

- One CMP became Federally qualified
- Two HMOs converted from non-profit to for-profit status
- Five HMOs became affiliated with national chains
- Four HMOs changed from staff model to mixed or network model organizations.

These changes, over a three-year period, are representative of the state of the HMO industry, which has experienced continuing rapid growth and organizational change, generally.

By year end 1986, 4 of the original 26 demonstration HMOs had terminated their Medicare risk contracts. The contracts that were not renewed included Delmarva, which was terminated by HCFA due to insolvency problems, ChoiceCare, Maxicare Chicago, and HealthOhio, which converted to a cost contract. All of these were IPA or Network HMOs. In addition,

TABLE II.2

ORGANIZATIONAL CHARACTERISTICS
OF MEDICARE COMPETITION DEMONSTRATIONS: 1984 and 1986

HMO	LOCATION	FEDERAL QUALIFICATION		PROFIT STATUS		CHAIN AFFILIATION		MODEL TYPE		MEDICARE ENROLLMENT		NON-MEDICARE ENROLLMENT	
		1984	1986	1984	1986	1984	1986	1984	1986	1984	1986	1984	1986
AV-MED	Miami, FL	Yes	Yes	For-P	For-P	National Medical Enterprises	National Medical Enterprises	Traditional IPA	Traditional IPA	10,242	7,247	63,207	80,140
Comprehensive American Care		Yes	Yes	For-P	For-P	None	None	Staff	Mixed	3,813	15,851	38,882	40,616
Health America		Yes	Yes	Non-P	Non-P	Health America	Maxicare	Staff	Staff	2,633	2,874	14,775	19,965
South Florida Group Health		Yes	Yes	Non-P	Non-P	BC/BS of Florida	BC/BS of Florida	Traditional IPA	Traditional IPA	484	5,044	9,833	60,689
International Medical Centers		Yes	Yes	For-P	For-P	None	Humana	Mixed	Mixed	102,935	124,491	39,835	29,907
Healthway	Boston/ Brockton	Yes	Yes	Non-P	Non-P	Blue Cross of Mass.	Blue Cross of Mass.	Group	Group	1,696	2,759	30,890	-
Medical East		Yes	Yes	Non-P	Non-P	Blue Cross of Mass.	Blue Cross of Mass.	Staff	Staff	2,536	4,709	13,111	25,753
Central Massachusetts	Worcester, MA	No	No	Non-P	Non-P	None	None	Traditional IPA	Traditional IPA	1,450	7,161	42,269	-

TABLE II.2 (continued)

HMO	LOCATION	FEDERAL QUALIFICATION		PROFIT STATUS		CHAIN AFFILIATION		MODEL TYPE		MEDICARE ENROLLMENT		NON-MEDICARE ENROLLMENT	
		1984	1986	1984	1986	1984	1986	1984	1986	1984	1986	1984	1986
Fallon Community		Yes	Yes	Non-P	Non-P	Blue Cross of Mass.	Blue Cross of Mass.	Group	Group	9,659	12,428	49,789	-
Medical West	Chicopee, MA	Yes	Yes	Non-P	Non-P	Blue Cross of Mass.	Blue Cross of Mass.	Staff	Staff	2,968	5,794 53,086	59,816	
FHP	LA	Yes	Yes	Non-P	Non-P	None	FHP	Staff	Network	13,816	47,694	75,708	199,952
United Health Plan		Yes	Yes	Non-P	Non-P	None	None	Staff	Mixed	4,364	14,538	51,399	-
Health Care Network	Detroit, Michigan	Yes	Yes	Non-P	Non-P	Blue Cross of Mich.	BC/BS of Mich.	Network	Network	1,095	3,928	45,841	160,198
Group Health Plan of Southeast Michigan		Yes	Yes	Non-P	Non-P	None	None	Staff	Staff	227	1,466	35,572	44,999
Preferred		No	No	For-P	For-P	None	None	Staff	Mixed	1,124	5,272	8,500	13,149
Maxicare	Chicago, IL	Yes	Yes	For-P	For-P	Maxicare	Maxicare	IPA	Network	525	7,577	109,827	121,037
Share		No	Yes	For-P	For-P	Yes	United	IPA	IPA	4,941	17,460	3,299	21,054
Metropolitan Health Plan	Indianapolis	Yes	Yes	Non-P	For-P	None	Maxicare	Staff	Staff	4,211	7,575	67,379	74,160
Health Plus of Michigan	Flint, MI	Yes	Yes	Non-P	Non-P	None	None	Traditional IPA	Traditional IPA	3,701	5,332	73,111	-

TABLE II.2 (continued)

HMO	LOCATION	FEDERAL QUALIFICATION		PROFIT STATUS		CHAIN AFFILIATION		MODEL TYPE		MEDICARE ENROLLMENT		NON-MEDICARE ENROLLMENT	
		1984	1986	1984	1986	1984	1986	1984	1986	1984	1986	1984	1986
Genesee	Rochester, NY	Yes	Yes	Non-P	Non-P	BC/BS of Rochester	BC/BS of Rochester	Group	Group	4,106	6,977	34,357	38,282
Choice Care	Cincinnati, OH	No	Yes	Non-P	Non-P	None	None	Traditional IPA	Traditional IPA	N/A	36,712	142,336	
Health Ohio	Central, Ohio	Yes	Yes	Non-P	Non-P	None	None	Traditionl IPA	6,142 Traditional IPA	998 2,314	15,074	18,476	
Crossroads	New Jersey	Yes	Yes	Non-P	For-P	None	Amercare	Traditional IPA	Traditional IPA	194	569	17,206 -	
Group Health Service Plan	Sacramento, CA	Yes	Yes	Non-P	Non-P	None	None	Group	Group 385	1,902 15,749 15,041			
French Hospital	San Francisco	Yes	Yes	Non-P	Non-P	None	None	Staff	Staff	2,108	4,878	10,000	11,450
Delmarva	Easton, MD	No	No	Non-P	Non-P	None	None	Traditional IPA	Traditional IPA	N/A	N/A	990	6,500

several of these plans were in low AAPCC areas, had contracted with a high proportion of area physicians, and were paying physicians on a contractual fee-for-service basis. In Table II.3, we compare the characteristics of continuing Medicare Competition Demonstration HMOs and CMPs with the characteristics of the four terminating HMOs and CMPs. The four terminating plans were younger HMOs and were less likely to be federally qualified than were the remaining HMOs. At the time these HMOs terminated their contacts, their Medicare enrollment was lower, on average, than enrollments in the HMOs that continued to participate in the demonstration. In addition the four that withdrew were less likely to be chain affiliated than were continuing HMOs, which suggests that the access to capital and the greater experience of the larger organizations may, in part, account for their relative success in this market. When we examine the physician incentives structure in these HMOs, we find that a higher proportion of terminating HMOs paid their primary care physicians on a fee-for-service basis than did continuing HMOs and CMPs. The relative lack of experience and, perhaps, less aggressive financial management, however, was almost certainly exacerbated by the fact that payments on behalf of Medicare beneficiaries in these areas were only 75 percent of payment levels in the principal counties of HMOs that continued in the demonstration. In fact, the AAPCC in counties where HMOs terminated contracts was $72 lower than the average AAPCC in counties with continuing HMOs and CMPs.

C. BENEFITS, PREMIUMS, AND COPAYMENTS, 1984 TO 1986

Because of their marketing efforts the HMOs that entered the Medicare market under the demonstration program gained a competitive

TABLE II.3

COMPARISON OF CHARACTERISTICS OF
NON-RENEWING AND CONTINUING
HMOs AND CMPs

Characteristics	Demonstration Plans	
	Remaining (N=22)	Withdrawing (N=4)
HMO Model Type		
- Staff	7 (31.8)	
- Group	4 (18.2)	
- IPA	6 (27.3)	3 (75)
- Network/Mixed	5 (22.7)	1 (25)
Years in Operation		
- Less than or equal to 5 years	5 (22.7)	2 (50)
- 6 years or more	17 (77.3)	2 (50)
Years in Medicare Risk Program		
- 4 years	13 (59.1)	4 (100)
- 3 years	6 (27.3)	--
- 2 years	3 (13.6)	--
Federally Qualified		
- Yes	20 (90.9)	2 (50)
- No	2 (9.1)	2 (50)
Average Medicare Enrollment	13,384 (N=16)	5,470
Average NonMedicare Enrollment	55,948 (N=16)	111,622 (N=4)
Profit Status		
- For	7 (31.8)	1 (25)
- Non	15 (68.2)	3 (75)
Chain Affiliation		
- Affiliated	14 (63.7)	1 (25)
- Independent	8 (36.3)	3 (75)
Primary Care Physician Capitation		
- Yes	9 (40.9)	1 (25)
- No	13 (59.1)	3 (75)
Average 1985 AAPCC level	286.75	214.78

SOURCE: Rossiter et al. (1988a)

advantage over other HMOs through name recognition, an advantage that later market entrants under TEFRA did not have. On the other hand, these early entrants were faced with the problems of educating Medicare beneficiaries to the general HMO concept and designing benefit packages that would be sufficiently attractive to entice beneficiaries to join a health care financing and delivery system that was essentially unfamiliar to them. In order to successfully enter the Medicare market, most HMOs chose to examine the benefit and premium package being offered by traditional Medicare supplemental insurers for the purpose of designing a package that would encourage enrollment in HMOs. Typically, the demonstration HMOs designed very generous benefit packages that required minimal or no copayments, and offered these packages at a premium substantially below that being charged by local Medicare supplemental insurers. Since most "medigap" insurance coverage picks up the deductible and coinsurance payments up to the full amount allowed by Medicare (leaving insured beneficiaries responsible for incurred costs that exceed the Medicare allowable level), the benefit package offered by the demonstration HMOs was even more generous than the simple comparison of benefits, copayments, and premiums would suggest.

The Medicare product being offered in the initial demonstration year was often based upon marketing considerations, within the constraints set by the AAPCC level and by the HMOs' projection (based on very limited data) of the costs that would be associated with serving the Medicare population. It is not surprising then that there were changes in the package over the next three years. Table II.4 summarizes the 1984 and 1986 premiums and key benefits offered by the Medicare HMOs and CMPs that were in the Medicare market continuously over this period. An examination of

TABLE II.4

BENEFITS, PREMIUMS, AND COPAYMENTS OFFERED BY MEDICARE COMPETITION DEMONSTRATION HMOs and CMPs
1984 AND 1986

HMO/CMP By Location	Premium 1984	Premium 1986	Physician Services Co-payment 1984	Physician Services Co-payment 1986	Prescription Drugs 1984	Prescription Drugs 1986	Vision Exams 1984	Vision Exams 1986	Eyeglasses 1984	Eyeglasses 1986	Hearing Exams 1984	Hearing Exams 1986	Hearing Aids 1984	Hearing Aids 1986	Dental Services 1984	Dental Services 1986
Miami																
AV-MED	$0.00	$0.00	$5.00	$5.00	$100 annual deduct/$400 maximum	Covered for inpatient	$15.00	$5.00	Free/1 pair year	$12/1 pair per year	$5.00	$5.00	Free/1 per year	Not Covered	Covered	Covered
Comprehensive American Care (CAC)	$0.00	$0.00	Free	Free	Free	Free	Free	Free	Free/1 pair per year	Free/1 pair per year	Free	Free	Not Covered	Free	Covered	Covered
South Florida Group Health	$14.00	$6.00	$3.00	$3.00	$50 deduct/ 80% covered	$50 deduct/ 80% covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered
IMC	$0.00	$0.00	Free	Free	Free	Free	Free	Free	Free	Free/2 pairs per year	Free	Free	Free	Free/1 every 3 years after 6 months of membership	Covered	Covered
Boston/Brockton																
Healthway Medical Plan	$24.75	$31.00	Free	$2.00	$3.00	$3.00	Free	$2.00	Not Covered	Not Covered	Free	$2.00	Not Covered	Not Covered	Not Covered	Not Covered
Medical East Health Plan	$15.00	$28.00	Free	Free	$2.00	$2.00	Free	Free	Not Covered	Not Covered	Free	Free	Not Covered	Not Covered	Not Covered	Not Covered
Worcester, MA																
Central Mass. Health Plan	$28.00	$30.00	$3.00	$3.00	$3.00	$3.00 brand name, $1.00 generic	$3.00	$3.00	Not Covered	Not Covered	$3.00	$3.00	Not Covered	Not Covered	Limited Coverage	Not Covered
Fallon Community Health Plan	$15.00	$15.00	Free	Free	Free	Free	Free, 1 per 2 yrs.	Free	Free/1 pair per 2 years	Free/1 pair per 2 years	Free	Free	Not Covered	Not Covered	Not Covered	Not Covered
Chicopee, MA																
Medical West Health Plan	$25.00	$32.50	Free	$2.00	$2.00	$2.00	Free	$2.00	Not Covered	Not Covered	Free	$2.00	Not Covered	Not Covered	Not Covered	Not Covered
Los Angeles																
Family Health Plan	$0.00	$0.00	$3.00	$3.00	$2.00	$2.00	Not Covered	$3.00	Not Covered	Not Covered-do offer at wholesale	$3.00	$3.00	Not Covered	Not Covered	Not Covered	Not Covered
United Health Plan	$0.00	$0.00	$4.00	Free	$4.00	Free	Not Covered	Free	Not Covered	Free/1 pair per 2 years	$4.00	Free	Not Covered	Not Covered	Not Covered	Not Covered

TABLE II.4 (continued)

HMO/CHP By Location	Premium 1984	Premium 1986	Physician Services Co-payment 1984	Physician Services Co-payment 1986	Prescription Drugs 1984	Prescription Drugs 1986	Vision Exams 1984	Vision Exams 1986	Eyeglasses 1984	Eyeglasses 1986	Hearing Exams 1984	Hearing Exams 1986	Hearing Aids 1984	Hearing Aids 1986	Dental Services 1984	Dental Services 1986
Detroit																
Health Care Network	$26.00	$10.00	Free	Free	Not Covered	Not Covered	Not Covered	Free	Not Covered	Not Covered	Not Covered	Free	Not Covered	Not Covered	Not Covered	Not Covered
Group Health Plan of S.E. Michigan	$39.38	$8.00	Free	Free	$3.00	Not Covered	Free	Free	Free	Not Covered	Free	Free	Not Covered	Not Covered	Not Covered	Not Covered
Preferred Health Plan	$0.00	$10.00	Free	Free	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered
Indianapolis																
Metropolitan Health Plan	$28.60	$38.50	Free	Free	$5.00	50% of cost	Free, 1 per 2 years	Not Covered	Free/1 pair per 2 years	Not Covered	Free	Not Covered	Not Covered	Not Covered	Cleaning and exams covered	Cleaning and exams covered
Flint, Michigan																
HealthPlus of Michigan	$46.66	$37.00	$3.00	$5.00	Free	$5.00	Not Covered	Not Covered	Not Covered	Not Covered	Free	Free	Free	Free	Not Covered	Not Covered
Rochester, New York																
Genesee Valley Group Health Association	$15.00	$25.00	$3.00	$3.00	50% of Cost	50% of Cost	$3.00	$3.00	50% of cost	50% of cost, 1 pair every 2 years	$3.00	$3.00	Not Covered	Not Covered	Not Covered	Not Covered
Central Ohio																
Health Ohio (Marion)	$30.00	$30.00	Free	Free	$3.00	$3.00 pay for difference bet. generic and non-generic	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Free	Not Covered	Not Covered	Free	Not Covered
New Jersey																
Crossroads	$24.00	$24.00	$5.00	$5.00	$100 deduct, 80% covered	$100 deduct, 80% covered	$5.00	$20.00 for a vision package. $20.00/ 1 exam a year AND (see eye-glasses)	Not Covered	1 pair every 2 years	$5.00	$5.00	Not Covered	Not Covered	Not Covered	Not covered offer a plan dental center/ $5 00 visit/ twice a year. The HMO is not involved.

TABLE II.4 (continued)

HMO/CMP By Location	Premium		Physician Services Co-payment		Prescription Drugs		Vision Exams		Eyeglasses		Hearing Exams		Hearing Aids		Dental Services	
	1984	1986	1984	1986	1984	1986	1984	1986	1984	1986	1984	1986	1984	1986	1984	1986
Chicago, Illinois																
Manicare of Illinois	$0.00	$0.00	Free	Free	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Free	Free	Not Covered	Not Covered	Not Covered	Not Covered
Share Health Plan	$19.75	$17.12	Free	Free	Not Covered	Not Covered	Free	Free	Not Covered	Not Covered	Free	Free	Not Covered	Not Covered	Not Covered	Not Covered
Sacramento, California																
Group Health Service Plan	$34.50	$44.95	Free	Free	$100.00 or actual charge first 12 days, $5.00 after that	Not Covered	$5.00	Not Covered	Not Covered	Not Covered	Free	Free	Not Covered	Not Covered	Free/1 per year	Not Covered
San Francisco, California																
French Hospital	$28.00	$28.00	Free	Free	$3.00 per 34 day supply	$3.00	Not Covered	Free	Pay cost over $75 every 2 years	Pay cost over $75 every 2 years	Not Covered	Free	Not Covered	Not Covered	Not Covered	Not Covered

the data in the table reveals the following trends over the three-year period:

- Premiums have increased in 7 plans, decreased in 4, and remained the same in 15 plans.
- Supplemental benefits--particularly vision, hearing, and dental--have been reduced.
- In most plans, cost sharing has remained stable or increased.

These results are particularly interesting in light of the fact that in the middle of the three-year period the plans converted from demonstration status to TEFRA program status. Under the TEFRA rules, they were required to "give back" to enrollees, in the form of reduced premiums and copayments or increased benefits, all surplus profits. The decline in generosity of the packages offered suggests that HMOs initially may have underestimated the costs of serving Medicare beneficiaries and, over time, are modifying the benefit package to reflect what they've learned about the costs of serving this population.

In addition to changes made in response to their increased experience, as well as to competitive pressures in the Medicare HMO market, it appears that many of the changes in the product being offered by Medicare HMOs were the consequence of changes in the level of the AAPCC from year to year. Of those HMOs that experienced a decline in the AAPCC between 1984 and 1986, all raised their premiums. Only 30 percent of HMOs in areas that had an increase in the AAPCC raised premiums over this period. While a change in the AAPCC is not the only factor underlying decisions related to premium level and benefit package, it does appear that

premium increases are likely to follow changes in AAPCC levels facing Medicare risk HMOs.

We also examined the extent to which early decisions about product design appear to influence subsequent decisions. In the three years that these original demonstration plans have been studied, both benefits and premiums have changed. In most cases, the total package has become less generous than it was in 1984. However, when we compare benefits offered by the original demonstration HMOs in 1986 with benefits offered by all TEFRA risk HMOs, we find that the demonstration HMOs have continued to offer more generous benefits than later entrants to the Medicare market. In Table II.5, we compare the benefits offered in 1986 by the 24 demonstration HMOs with those offered by all TEFRA HMOs:

- 70 percent of the demonstration HMOs, but only 40 percent of all HMOs, offer prescription drug benefits.
- 70 percent of demonstration HMOs, but only 52 percent of all HMOs, offer hearing exams.
- 17 percent of demonstration plans offer hearing aids, while only 8 percent of all HMOs do.
- 25 percent of all demonstration plans offer some dental coverage, while only 9 percent of other HMOs do.
- The average premium charged by the demonstration HMOs in 1986 was $1.71 less per month than the average premium charged by all TEFRA HMOs and CMPs.

One reason the original risk HMOs may have offered such generous benefits was that they were in high AAPCC areas, and therefore expected to receive sufficiently high revenues to cover the costs of these supplemental

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[2]By year end 1985, 2 of the original 26 demonstration HMOs had terminated their contracts so were no longer considered in the demonstration evaluation.

TABLE II.5

COMPARISON OF BENEFITS OFFERED IN 1986:
MEDICARE COMPETITION DEMONSTRATION PLANS VERSUS ALL
TEFRA HMOs AND CMPs

Benefits Premiums	Medicare Competition Plans	All TEFRA Plans
Physician Visits	95.83% (N=23)	90.98% (N=121)
Preventive Care-Immunizations	66.67% (N=16)	78.20% (N=104)
Extended Hospital Coverage	87.50% (N=21)	90.23% N=120)
Extended SNF Coverage	54.17% (N=13)	57.14% (N=76)
Drugs	70.83% (N=17)	40.60% (N=54)
Vision Exams	62.50% (N=15)	62.41% (N=83)
Eyeglasses	33.33% (N=8)	27.07% (N=36)
Hearing Exams	70.17% (N=19)	52.63% (N=70)
Hearing Aids	16.67% (N=4)	8.27% (N=11)
Dental Coverage	25.00% (N=6)	8.96% (N=12)
Premium	$18.64	$20.35
	(N=24)	(N=133)

NOTE: Data were obtained from the Report to Congress: Additional Benefits (Benefits Above Those Required by Medicare). Provided by Health Maintenance Organizations under Risk Sharing Contracts, Health Care Financing Administration, (March 31, 1987)

Source: Rossiter et al. (1988a)

benefits. However, they may also have chosen to offer an exceptionally rich benefit package as a marketing strategy to attract beneficiaries to this new program. If so, they may have found it difficult to pull back from this generous package, even if it became clear after the initial year or two that these benefits were more expensive than they had anticipated.

D. ENROLLMENT AND DISENROLLMENT PATTERNS

At the end of 1984, the 26 demonstration HMOs had all been enrolling Medicare beneficiaries for at least a year. The total number of Medicare enrollees in these HMOs and CMPs was 123,588, ranging from a low enrollment of 130 in one plan to a high of 43,788 in an HMO that had started enrolling in late 1982. The average enrollment across the 26 demonstration HMOs was 5,779 Medicare beneficiaries. Disenrollments in 1984 were somewhat higher than expected based on an observed disenrollment rate in the industry of approximately 5 percent. However, Medicare beneficiaries are permitted to disenroll with only two weeks notice. While this provision provides a "safety net" for Medicare beneficiaries who enroll without understanding the implications of HMO service delivery and for those who are dissatisfied with the quality of services they receive, it also implies that Medicare HMO enrollment is very fluid. Table II.6 summarizes the 1984 and 1986 enrollment and disenrollment experience of the demonstration HMOs.

By 1986, the total enrollment in these HMOs had grown to 315,838--a 75 percent increase overall. In general, the rate of increase in enrollments was greater between 1984 and 1985 than between 1985 and 1986. This may reflect either the HMOs' decisions to limit expansion, the increased competition from new HMOs and CMPs that began entering the

TABLE II.6

ENROLLMENTS AND DISENROLLMENTS FROM MEDICARE COMPETITION
DEMONSTRATION HMOs AND CMPs: 1984 - 1986

Health Plan	Date Enrollment Started	Enrollment[a] 1984	Enrollment[a] 1986	Percent Growth 1984-1986	Disenrollment[b] 1984	Disenrollment[b] 1986	Disenrollment Ratio[c] 1984	Disenrollment Ratio[c] 1985
ALL PLANS		186,353	315,838	69.5	34,823	78,577	15.7	19.5
Miami								
AV-MED	12/82	10,242	7,247	-29.2	5,089	1,798	33.2	19.9
Comprehensive American Care	11/82	3,813	15,851	315.7	756	6,693	16.5	29.7
HealthAmerica	2/83	2,633	2,874	9.2	801	616	23.3	17.7
South Florida Group Health	3/84	484	5,044	942.1	48	593	9.0	10.5
International Medical Centers	8/82	102,935	124,491	20.9	22,816	37,222	18.2	23.0
Boston/Brockton								
Healthway	1/84	1,696	2,759	62.7	61	171	3.5	5.8
Medical East	10/83	2,536	4,709	85.7	132	346	5.0	6.8
Worcester, Massachusetts								
Central Massachusetts	1/84	1,450	7,161	393.9	51	190	3.4	2.6
Fallon	9/83	9,659	12,428	28.7	344	339	3.6	2.7
Chicopee, Massachusetts								
Medical West	1/84	2,968	5,794	95.2	87	182	2.9	3.1
Los Angeles								
Family Health Program	12/83	13,816	47,694	245.2	2,839	8,336	17.1	14.9
United Health Plan	5/84	4,364	14,538	233.1	311	2,635	6.7	15.3
Detroit								
Health Care Network	5/84	1,095	3,928	258.7	18	6,387	1.6	61.9
Group Health of SE Michigan	3/84	227	1,466	545.8	86	209	27.5	12.5
Preferred Health Plan	9/84	1,124	5,272	369.0	16	489	1.4	8.5
Indianapolis								
Metropolitan	1/84	4,211	7,575	79.9	111	594	2.6	7.3
Flint, Michigan								
HealthPlus of Michigan	10/83	3,701	5,332	44.1	141	1,743	3.7	24.6
Rochester, New York								
Genesee Valley Group Health Association	12/83	4,106	6,977	69.9	160	303	3.8	4.2
Cincinnati								
ChoiceCare	4/84	6,142	d	d	60	d	1.0	d

Table II.6 (continued)

Health Plan	Date Enrollment Started	Enrollment[a] 1984	Enrollment[a] 1986	Percent Growth 1984-1986	Disenrollment[b] 1984	Disenrollment[b] 1986	Disenrollment Ratio[c] 1984	Disenrollment Ratio[c] 1986
Easton, Maryland								
Delmarva	3/84	130	d	d	-	d	d	d
Central Ohio								
HealthOhio (Marion)	4/84	998	2,314	131.9	17	111	1.7	4.6
New Jersey	4/84	194	569	193.3	13	78	6.3	12.1
Crossroads					-			
Chicago								
Maxicare	12/84	525	7,577	1343.2	290	4,525	0.2	37.4
Share	7/84	4,941	17,460	253.4	290	2,239	5.5	11.4
Sacramento, California								
Group Health Service Plan	10/84	385	1,902	394.0	21	194	5.2	9.3
San Francisco								
French Hospital	9/84	2,108	4,876	131.3	265	584	11.2	10.7

[a]Enrollment for each year is the number of beneficiaries enrolled as of December of that year.

[b]Disenrollments are the number of beneficiaries who disenrolled at some time during the year for reasons other than death.

[c]The disenrollment ratio is defined as the ratio of disenrollments during the year to the total number of beneficiaries active at any time during the year (enrollment at year end plus disenrollments).

[d]ChoiceCare and Delmarva terminated their risk-contracts in December 1985.

Medicare market during 1985, or just the ability of HMOs to attract a larger proportion of the Medicare population over time.

The disenrollment ratio (defined as the ratio of the number of disenrollments during the year to the total number of beneficiaries active at any time during the year) was 16 percent in 1984 and had grown to 19.5 percent by 1986. In all, 76,577 Medicare beneficiaries chose to leave these HMOs and CMPs during 1986. However, the disenrollment ratios varied widely across plans and over time. Disenrollment was more common in multiple demonstration plan markets, particularly in Miami and in Los Angeles. In single demonstration plan areas, the disenrollment ratio was generally below 5 percent. Disenrollment in 1986 ranged from a low of 2.6 percent to a high of 61.9 percent. Unusually high disenrollment ratios in several HMOs, particularly in 1986, may reflect the presence of new HMOs in these markets and the increased competitive nature of these markets. Nearly one quarter of disenrollments between mid-1985 and mid-1986 involved beneficiaries who joined another HMO.

When we examined the relationship between disenrollment ratios and benefit and premium changes during 1986, we found that ratios were highest for those plans that improved benefits and lowered premiums in that year and lowest for those HMOs that had made their packages less attractive. However, it may be that the HMOs that were making their benefit and premiums more attractive to beneficiaries were doing so in response to their concern about high disenrollments, rather than to prevent disenrollments.

Disenrollment ratios also appeared to be unrelated to the rate at which HMOs grew in Medicare enrollment in the previous year. Rapid

enrollment growth does not seem to have affected availability and quality of services to earlier enrollees--at least not so much as to have caused these enrollees to leave the HMOs. However, disenrollment ratios were related to the size of total Medicare enrollment, averaging 12.8 percent in those plans with fewer than 5,000 enrollees in December 1985 and nearly 20 percent for those HMOs with 9,000 or more enrollees at that point in time. It is unclear whether this pattern reflects problems internal to the high enrollment Medicare HMOs or merely the more competitive environment in which these larger HMOs may have been operating.

E. DISCUSSION

The HMOs and CMPs that participated in the Medicare Competition Demonstrations were not fully representative of the HMO industry when they were selected for the demonstration in 1982-83. Because of the rapid changes occurring in this industry during the demonstration period--and because of changes in the demonstration HMOs and CMPs themselves--by 1986 the demonstration plans were even more different from the "typical" HMO. Consequently, it should be realized that generalizing from the Medicare Competition Demonstration experience to the implications for all HMOs must be done cautiously. As a result of the Evaluation of the Medicare Competition Demonstrations our knowledge about HMOs, their operations, and their impacts, particularly with respect to Medicare involvement, has increased significantly. On the other hand, the rapid expansion of the TEFRA HMO/CMP program and this continuing experience may not closely parallel the findings that have emerged from the evaluation, due to dramatic changes in the industry, the Medicare program, and beneficiaries' understanding of their options. The value of the evaluation results may be

nearly as great for pointing the way for future directions of research and policy assessment as for the conclusions that may be drawn, at this point in time, from this research.

III. MARKETING AND BENEFICIARY CHOICE[1]

A. OVERVIEW

In order for the Medicare HMO program to succeed, HMOs must enroll enough beneficiaries to make an impact on Medicare payments and reduce risk to the plans. Therefore, understanding HMO marketing and the beneficiary choice process was considered an important part of the Medicare Competition Evaluation. The HMOs were expected to design a product that was appealing in terms of the benefits and services offered, cost of the benefit package, and style of the delivery system that provides the services. HCFA was interested in the marketing approaches used by the HMOs, their success in enrolling and retaining beneficiaries in their plans, the beneficiaries' motivations for joining HMOs, the choice process beneficiaries undergo in making their decision, and the reasons for disenrollment and returning to a fee-for-service system or joining another HMO.

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[1]The research summarized in Chapter III is drawn from the following sources:

Langwell, K., et al. Report on the Implementation of Medicare Competition, February 1986.

Brown, R., et al. Enrollment and Disenrollment in Medicare Competition Demonstration Plans: A Descriptive Analysis, September 1986.

Langwell, K., and J. Hadley. "Marketing Strategies for Medicare HMOs: Experience from 20 Demonstration Plans," in New Health Care Systems: HMOs and Beyond. Washington, D.C.: Group Health Association of America, Spring 1987.

Brown, R., and K. Langwell, "Enrollment Patterns in Medicare HMOs: Implications for Access to Care" in Advances in Health Economics and Health Services Research, R.M. Scheffler and L.F. Rossiter (eds.), Greenwich, CT: JAI Press, 1988.

To analyze the HMO marketing process we examined the following specific elements:

- Types of marketing activities,
- The market position of each HMO relative to its competition,
- Marketing expenditures, and
- The extent to which HMOs were successful in meeting enrollment targets.

Understanding the factors involved in beneficiaries' decisions is important for developing a successful marketing strategy. We therefore examined the following aspects of beneficiary choice behavior:

- The extent to which beneficiaries were aware of the existence of the HMO option,
- How beneficiaries heard about the HMOs,
- Reasons beneficiaries gave for their decision to enroll or not enroll in HMO, and
- Characteristics of HMO enrollees and nonenrollees.

B. DATA

Data for the marketing and beneficiary choice studies came from a variety of sources. Data on HMO characteristics and strategic planning were obtained from a series 20 site visits to 20 of the original 26 HMOs/CMPs, as well as from demonstration applications and protocols submitted to HCFA. Enrollment and disenrollment data were obtained from files maintained by HCFA's Office of Prepaid Health Care.

In order to examine choice and satisfaction issues, two surveys of Medicare beneficiaries were conducted in 10 market areas where 17 Medicare

demonstration HMOs were operating. The initial survey was conducted during the first half of 1985; approximately 2,000 Medicare beneficiaries who enrolled in one of the 17 demonstration HMOs were interviewed by telephone to obtain information on their decision to enroll in the HMO, their characteristics, attitudes toward health care, prior health care arrangements, and perceived health status. Those enrollees who had disenrolled from the HMO by the time of the survey were also asked their reasons for disenrollment. Another 2,000 Medicare beneficiaries who did not enroll in a Medicare HMO were also interviewed and asked the same set of questions about characteristics, attitudes, current health care arrangements, and perceived health status. A second survey was conducted one year later, during which these same enrolled and nonenrolled Medicare beneficiaries were interviewed about their satisfaction with the HMO or their fee-for-service arrangements and their experience with access to care. Again, disenrollees were asked to report their reasons for disenrollment.

C. RESULTS OF THE HMO MARKETING ANALYSIS

1. Marketing Activities

The HMO industry has traditionally focused on marketing to employment-based groups, with marketing efforts directed toward obtaining group contracts with employers. Marketing to Medicare beneficiaries requires a different approach, since the HMO must now focus its marketing activities on individuals rather than groups. Because the Medicare HMO program is a relatively new option available to beneficiaries, initial HMO marketing to the Medicare population had a dual focus. First, it was designed to inform beneficiaries that an alternative existed to the

standard Medicare fee-for-service system. Second, it was designed to persuade the beneficiary that a specific plan was the best choice of the available options.

The promotional activities observed in HMO marketing were diverse. Mass marketing approaches were used to solicit beneficiary enrollment in an HMO through the media, including television, radio, newspapers, billboards, and direct mailings. Personal contact solicitation approaches were also used; these included telephone sales, presentations to seniors groups or residences, open houses, and physician promotion of a particular plan.

Every HMO/CMP used a number of these advertising and promotional tools. Ninety percent used direct mailings, newspaper ads, and presentations to small groups. A smaller percentage used more expensive television and radio advertising in promoting their plan (50 percent and 60 percent, respectively). In conjunction with other activities, most of the IPAs used physicians to promote their plan. Billboards and telephone sales were used infrequently by all of the demonstration HMOs.

2. Positioning

For the purposes of this analysis, the market position of an HMO was operationally defined as the way in which it describes itself, that is, the features of the plan that the HMO stresses to define its identity and thus single it out from its competitors. The market position an HMO adopts is influenced by the competitive environment in which it operates and the perceptions of management concerning the strengths and weaknesses of their own plan relative to the competition. That competition can include other HMOs, traditional Medicare supplemental policies, and standard Medicare coverage. All 20 plans included in this portion of the analysis were faced

with competition from supplemental insurers and standard Medicare coverage, while 14 of the plans were located in market areas where they were also competing with other demonstration HMOs. Since both the competitive environment in which the plans operated and their organizational form were variables over which management and marketing staff had no control, this analysis examined not only the market position adopted by the demonstration HMOs in general, but also the relationship of organizational form and competitive environment to positioning.

Results of a content analysis of the advertisements submitted to HCFA demonstration project officers for review during 1984 (as required under the demonstration agreement) indicated that--

- Consistent with statements made by HMO staff concerning strategic planning during the site visits, the demonstration HMOs viewed insurers offering standard Medicare coverage and supplemental insurance policies as their primary competition and attempted to position themselves as an alternative to these options by emphasizing in their advertisements low costs, reduced paperwork, and expanded coverage.

- Benefits less likely to be covered by supplemental policies, such as prescription drug benefits, expanded inpatient coverage, expanded coverage of physician services, and physical examinations, were mentioned far more often by the demonstration HMOs than any other benefits.

- Although most comparative statements in HMO advertising made reference to supplemental insurance plans or standard Medicare coverage, there was some evidence of positioning within groups of competitive HMOs in areas where there was more than one in operation. Twenty-nine percent of HMOs in these areas made statements in their advertising that compared themselves to another HMO or attempted to differentiate their plan from those of "most HMOs".

- When competing against each other, most HMOs emphasized their age, the number of physicians to choose from, and the size of their total enrollment; whereas they tended

to emphasize cost and benefits when comparing themselves to standard Medicare or supplemental policies.

- While they presented themselves as an alternative to other coverage options, only 50 percent of the HMOs identified themselves as such in their advertising. A far greater number (85 percent) chose to emphasize their plan's brand name (e.g., "The Gold Plan") in advertisements--perhaps because of a belief that Medicare beneficiaries were not aware of the HMO concept or that there were negative connotations attached to the HMO concept. In either case, the HMOs appeared to feel that a brand name was more desirable and important than the HMO concept in defining their identity.

In summary, the HMOs tended to use their promotional materials to position themselves as an alternative to Medicare supplemental policies, focusing on their richer benefit package and lower cost, while downplaying their HMO status.

3. Marketing Expenditures

HMO expenditures for marketing activities during 1984 varied considerably, ranging from a low of $3,600 per quarter to a high of $933,000 per quarter, with a mean of $140,000 per quarter. For the 14 HMOs that supplied adequate data on marketing expenditures, a relatively strong relationship (.56 correlation) was found between marketing expenditures and enrollment, even after one very large plan with very high marketing expenditures was dropped from the analysis (there was a .94 correlation before this plan was dropped).

An analysis of plan characteristics related to level of expenditure revealed that HMOs spending more on marketing tended to be older, for-profit plans that were affiliated with a chain, were new to the Medicare market, and operated in market areas having more than one Medicare HMO, a high AAPCC, and a high ratio of physicians to beneficiaries.

4. Enrollment Targets

Marketing strategies are determined, at least in part, by the enrollment goals of the HMOs. Projected enrollment figures supplied by the HMOs at the beginning of the demonstrations and actual enrollment during 1984 and 1985 were used to analyze the degree of success that HMOs experienced in meeting their enrollment targets and the plan and market area characteristics that were associated with an HMO's success or lack of success in meeting its goals. Of the 20 plans studied, 10 met their first-year enrollment targets and 2 others were relatively close to their target. HMOs meeting their enrollment targets tended to be older, independent, staff and group model plans with prior Medicare experience, were located in market areas that had with a low AAPCC and only one HMO, and spent more on marketing. However, an HMO's success at meeting its enrollment target may just as likely be due to its having set realistic enrollment goals as to the success of its marketing strategy.

It is important to note that lack of success in meeting first-year enrollment goals should not be considered unusual for HMOs just starting up in a market where there were few guidelines for making accurate enrollment projections. Undoubtedly, the demonstration HMOs obtained a great deal of experience during the first year's operation, which enabled them to make more accurate enrollment projections for future years.

D. RESULTS OF THE BENEFICIARY CHOICE ANALYSIS

A Medicare beneficiary's decision to join an HMO involves weighing a plan's benefits, cost, and health care delivery system, as well as other factors such as reputation and location, relative to their needs. In

addition, even if they find some aspects of an HMO appealing, most beneficiaries who have only staff or group model HMOs available to them need to decide whether they are willing to change physicians (the same situation would, of course, apply to IPA and network model HMOs if their physician is not already a member). This can be a very important consideration for beneficiaries who have established ties to a physician not participating in an HMO, particularly those who are currently under treatment for a specific health problem or have a chronic condition that their physician has been treating for some time.

Before such considerations come into play, however, Medicare beneficiaries must be aware that participation in an HMO is indeed an option for them. In addition, some motivation must exist for the beneficiary to either search for an alternative to standard Medicare or to respond to advertising for such an alternative. Motivating factors will vary extensively among individual beneficiaries. For the HMO option to be appealing, however, there must be some degree of dissatisfaction with their current health care delivery or insurance system, at least relative to the new alternatives.

1. Awareness of the HMO Option and Sources of Information

Only about half (53.3 percent) of all nonenrollees that responded to a survey conducted shortly after HMO enrollment occurred, were aware that an HMO existed in their area. While at first this may seem to indicate that the massive marketing efforts employed by some of the HMOs were not effective, an examination of individual market areas revealed that this may not be the case. There was a great deal of variation in awareness across market areas. For example, fewer than one-third of Boston and

Los Angeles nonenrollees were aware of the HMO option, compared with over three-fourths of the Miami nonenrollee group. While we do not have the data to examine the relationship between marketing expenditures and awareness over a given time span, we do know that quarterly marketing expenditures were much higher in Miami than in Boston and Los Angeles and that HMOs were much more often the subject of newspaper and television/radio news in Miami than they were in Boston and Los Angeles-- which may mean that HMO awareness in a market is related to total marketing expenditures by all HMOs in that market.

Additional insight into the issue of awareness can be found by examining of the differences reported by enrollee and nonenrollee survey respondents in terms of how they obtained their information. While nonenrollees were most likely to have heard about the existence of the HMO through mass media sources (television, radio, and newspapers), enrollees were just as likely to mention friends and relatives or personal contact with the HMO or one of its representatives (e.g., at a presentation or open house) as a source of information. This finding suggests that beneficiaries who were more likely to enroll in an HMO may have been seeking out information about alternative providers or insurance coverage when they heard about the HMO option.

While HMO marketing efforts appear to be successful in making beneficiaries aware of the existence of the HMO alternative and the important features of the medical plan, there appear to be other sources of information that are more influential in beneficiary decision making. As indicated in Table III.1, when beneficiaries were asked what source of information was <u>most influential</u> in their enrollment decision, only 10

TABLE III.1

MOST INFLUENTIAL SOURCES OF INFORMATION FOR ENROLLMENT DECISIONS

Factor	Enrollees Indicating Factor Was Most Influential	
	Number	Percent
Total	1,874[a]	100.0
Friend/Relative	580	30.9
-- HMO Member	476	25.0
-- Not HMO Member/Not Sure	104	5.9
Open House	430	22.9
Direct Mail	361	19.3
HMO Representative[b]	197	10.5
Medical Professional	65	3.5
Speaker at Meeting	58	3.1
Television	101	5.4
-- Ad	77	4.1
-- Story	24	1.3
Newspaper	75	4.0
-- Ad	63	3.4
-- Story	12	.6
Radio	7	.4
-- Ad	6	.3
-- Story	1	.1

[a]This number excludes those whose interview was completed by a proxy who was not involved in the decision to enroll the sample member in the HMO.

[b]Enrollees' contacts with HMO representatives in this context occurred during the enrollee's visit to the HMO (not during an open house) or during a visit by the HMO representative to the enrollee's home.

percent cited one of the mass media sources. The most frequently given responses to this question fell into the category of "friends and relatives" (31 percent), with the friend or relative usually being a member of the HMO they subsequently joined. Open houses (23 percent) and direct mail (19 percent) were also frequently given as the most influential source.

Thus, it appears that while HMO mass marketing may increase awareness, word of mouth, personal recommendations, and exposure to more detailed information, such as that typically presented during an open house or in direct mail advertisements, was more influential in the enrollment decision. This finding is significant because as HMOs increase their amount of advertising, it's important that they realize that beneficiaries appear to be influenced by more than just a catchy name or the enticement of low-cost and additional coverage that can be presented in a brief mass media advertisement. In as important a decision as choosing a health care provider and insurer, it would appear that prospective enrollees are much more influenced by a personal recommendation and by exposure to more complete information about what an HMO has to offer.

Additional evidence for the influence of personal recommendations over mass media advertising comes from an examination of responses beneficiaries gave in individual market areas. As indicated in Table III.2, even beneficiaries in the Miami market (where massive resources were devoted to HMO advertising) mentioned the influence of word of mouth much more frequently (44 percent) than any other source of information, and more frequently than did enrollees in all but one of the market areas in the study.

TABLE III.2

MOST INFLUENTIAL SOURCES OF INFORMATION, BY MARKET AREA

Factor	All Enrollees	Los Angeles	Miami	Indiana-polis	Boston	Worcester	Chicopee	Flint	Detroit	Rochester	Cincin-nati
NUMBER OF MEDICARE HMOS	--	2	5	1	2	2	1	1	3	1	1
Friend/Relative	30.9%	11.6%	43.8%	55.5%	28.5%	36.0%	33.3%	31.3%	8.2%	42.3%	18.6%
Open House	23.0	21.7	4.2	17.7	36.6	18.0	40.2	5.1	33.8	29.7	50.9
Mail/Literature	19.3	40.4	6.8	15.9	18.1	15.8	12.0	26.3	35.5	23.4	6.8
HMO Representative	10.4	18.3	17.6	4.2	6.5	13.9	2.6	11.0	6.9	1.0	3.3
Health Professional	3.5	1.0	4.5	1.7	0.0	5.9	1.7	17.2	2.6	0.0	3.4
Speaker at Meeting	3.1	3.0	2.1	2.5	3.0	4.5	6.8	0.0	1.7	0.9	8.5
Television	5.4	1.5	16.6	1.7	0.0	0.9	0.0	0.0	7.4	2.7	2.5
Newspaper	4.0	2.0	3.5	0.8	7.3	5.0	3.4	9.1	3.5	0.0	5.1
Radio	0.4	0.5	0.9	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.9

Although the percentage of Miami HMO enrollees who were most influenced by mass media was much lower than the percentage most influenced by word of mouth, the resources devoted to mass media advisements of Miami HMOs were not wasted: The percentage of beneficiaries who reported being most influenced by mass media advertisements was much higher in Miami (21 percent), where television ads were frequent and featured well-known personalities like George Burns, than in any of the other market areas (where this percentage ranged from 2.5 percent to 11.3 percent).

2. Reported Reasons for Enrolling in an HMO

Once a beneficiary is aware of the HMO option, he or she must go through a decision process, weighing the attributes of the HMO option against their current source of care and other available supplemental insurance options. When asked for the most important reason they chose their plan, beneficiary responses most often involved cost (54 percent) and benefits (23 percent). Medical arrangements (7 percent), convenience (10 percent), and recommendation/reputation (6 percent) were much less likely to be mentioned as the most important reason, though they undoubtedly are considered in the decision-making process. The relative frequency with which these reasons are cited closely corresponds to the relative emphasis that each is accorded in HMO promotional materials and suggests that the HMOs are succeeding in focusing their marketing efforts on the issues of most concern to beneficiaries.

3. Characteristics of HMO Enrollees

In order to more fully understand the choice process, we must consider not only the influence of HMO marketing, but also the differences

in demographics and motivation between beneficiaries who are receptive to the marketing influence, and thus enroll in an HMO, and those that are not receptive and choose to remain in the fee-for-service system.

When we compared the characteristics of Medicare beneficiaries who enrolled with those of nonenrollees, we found they were significantly different in several ways at enrollment:

- Enrollees were more likely that nonenrollees to have been
  - -- married
  - -- residing in a private home on a year-round basis
  - -- Hispanic
  - -- younger
  - -- earning less than $10,000 per year
  - -- dissatisfied with their regular source of care
  - -- worried about their health
  - -- avoiding doctor visits
  - -- able to perform routine activities of daily living
  - -- in excellent (self-reported) health.

- Nonenrollees were more likely than enrollees to have been
  - -- in a nursing home
  - -- Medicaid eligible
  - -- better educated
  - -- earning over $25,000 per year
  - -- insured through a group policy and paying no premium for their insurance coverage
  - -- seeing a physician and indicating that seeing the same physician was important to them
  - -- given a routine physical exam during the previous year
  - -- confined to bed during the two previous weeks
  - -- aware of having a health problem that might require hospitalization
  - -- spending more out-of-pocket for health services.

These differences suggest that enrollees are healthier and are, in some respects, less likely to have sought or obtained health care prior to joining the HMO. However, it also appears that enrollment may be more likely among those Medicare beneficiaries who face financial barriers to

access to health care. To explore this possibility further, we categorized Medicare beneficiaries by selected access-related characteristics:

- income level
- Medicare supplemental insurance coverage
- Medicaid eligibility

Our descriptive results showed that, in fact, a substantial fraction of those who were attracted to Medicare HMOs had characteristics that suggest limited access to health care. Only 64 percent of enrollees had Medicare supplemental polices, significantly less than the proportion of nonenrollees with such coverage. About 56 percent of enrollees had incomes under $10,000, compared with 50 percent of nonenrollees. Furthermore, the proportion of enrollees eligible for Medicaid, which provides comparable coverage, was smaller than the proportion of Medicaid-eligible nonenrollees.

Non-economic indicators also suggested that HMO enrollees had low access to care. Enrollees were significantly less likely that nonenrollees to have had a regular source of care, and for those beneficiaries who did have a regular doctor, enrollees were more likely to be dissatisfied with the travel required to get to the doctor's office or with the availability of emergency care. Enrollees were also more likely than nonenrollees to be in need of routine care or a physical exam prior to enrollment, which could be due, at least in part, to restricted access to care.

To determine whether the observed differences between enrollees and nonenrollees on characteristics related to access were actually due to differences in health status or other characteristics that could influence

both the access variables and the probability of enrollment, an equation to predict enrollment as a function of access-related measures, health status, and other factors was estimated. The results show that beneficiaries with incomes in the lowest quartile (i.e., under $6,000) are more likely to enroll than those with incomes in the top quartile (roughly, those with income over $16,000). Those without Medicaid coverage and those who lack coverage for prescription drugs are also more likely to enroll in a Medicare HMO, as are those who do not have a physician with whom they are quite satisfied.

To provide an estimate of the strength of the association between low access and the probability of enrollment, the estimated model was used to obtain predicted probabilities of enrollment for beneficiaries with low and high access to care. Calculations showed that although only 4.8 percent of all beneficiaries enrolled, the estimated probability of enrollment was less than 1 percent for those with characteristics suggesting a high degree of access to care and about 22 percent for those with low access characteristics, with low income and the absence of a recent physical exam having the greatest influence on the probability of enrollment.

E. DISCUSSION

In summary, enrollment in the Medicare HMO program has grown rapidly since the Medicare Competition Demonstration program began. The reasons beneficiaries give for joining an HMO indicate that the generous benefits, minimal copayments, and relative low premiums offered by the Medicare HMOs (which are quite attractive compared to the benefits offered by the Medicare program and most Medicare supplemental insurers) are

largely responsible for this growth. HMOs' marketing strategies during the demonstration period capitalized on these advantages and targeted standard Medicare coverage and supplemental insurers as their primary competition. As more HMOs participate in the TEFRA program and as their penetration into the Medicare market increases, HMOs may be increasingly more likely to regard other HMOs as their primary competition, and a shift in marketing strategy may occur. Whatever the focus of HMO marketing efforts, the results of the evaluation indicate that recommendations of friends and relatives continue to exert the strongest influence over beneficiary decision making.

The research findings indicate that the HMOs are more likely to appeal to beneficiaries with lower incomes and no supplemental insurance or usual source of care than to beneficiaries who have high incomes and carry Medicare supplemental insurance. This finding suggests that HMOs may be appealing to individuals who encounter financial barriers to access to care and suggests that the increased access to care that HMOs offer to elderly individuals who have limited resources but are not eligible for Medicaid is an important additional benefit of the Medicare capitation program that should not be overlooked.

TABLE VI.1

PROJECTED HOSPITAL UTILIZATION RATES
1984

Plan	Projected Hospital Days per 1,000 Enrollees	Actual Hospital Days per 1,000 Enrollees (1984)	Hospital Days per 1,000 Medicare Beneficiaries in HMO's Market (1982)[a]
1. AV-MED	4,013	1,640	4,245
2. CAC	b	1,556	4,245
3. Health Care of Broward	2,500	1,935	4,245
4. South Florida Group	2,800	3,805	4,245
5. IMC	3,780	2,043	4,245
6. Healthway	2,775	2,443	5,552
7. Medical East	2,500	2,770	5,552
8. Central Mass.	3,500	3,845	4,825
9. Fallon	2,400	1,929	4,825
10. Medical West	2,500	2,079	4,984
11. Family Health Program	2,000	1,401	4,050
12. United Health Plan	2,600	1,700	4,050
13. Health Care Network	3,800	c	5,408
14. Group Health of Southeast Michigan	3,765	1,790	5,408
15. Preferred Health	2,400	c	5,408
16. Metro Health	2,045	1,874	5,334
17. Delmarva	3,250	c	4,125
18. HealthPlus	3,800	3,139	5,621
19. ChoiceCare	3,000	2,779	5,180
20. Genesee Valley Group	2,900	1,951	4,276

[a]Variable constructed by dividing Medicare inpatient days by the population over 65 in thousands.

[b]CAC did not provide utilization projections.

[c]Several of the demonstration plans' utilization rates indicate reporting errors. HealthCare Network, Preferred Health, and Delmarva were not included in this table.

Source: Langwell et al. (1985)

IV. SATISFACTION AND DISENROLLMENT[1]

A. OVERVIEW

While beneficiary enrollment decisions may be heavily influenced by financial considerations and the attractiveness of the HMO benefit package, to retain these enrollees HMOs must provide services that satisfy Medicare beneficiaries. Satisfaction is an even more important issue for the Medicare HMO enrollee population than for the non-Medicare population, since Medicare enrollees are free to disenroll almost immediately upon deciding that they are dissatisfied with some aspect of the HMO service delivery system. Most non-Medicare HMO enrollees are free to change their insurer only once annually during the time their employers offer an open enrollment period; thus, they are less likely to react to dissatisfaction by disenrolling.

Satisfaction is also a dimension of overall quality of care. Because most beneficiaries have little or no training in or knowledge about medicine or the provision of health care, they may not always be able to judge the clinical quality of the care that they receive from health care providers; however, their perceptions about the quality of care they receive and the responsiveness of the delivery system to their needs and

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[1]The research summarized in Chapter IV is drawn from the following sources:

Rossiter, L.F., et al. Report on Patient Satisfaction for Enrollees and Disenrollees in Medicare Risk HMOs and CMPs, May 1988.

Brown, R., et al. Enrollments and Disenrollments in Medicare Competition Demonstration Plans: A Descriptive Analyses, November 1985.

concerns may well affect the frequency with which they use the services provided by the HMO. In addition, of course, these perceptions do determine the beneficiaries' willingness to remain in the HMO. To the extent that Medicare HMO market penetration is expected to stimulate competition and to reduce Medicare program costs in the long run, satisfaction and continuing enrollment are important issues to examine.

B. DATA

The data obtained from the two surveys of beneficiaries, described in Chapter III, were used to examine several dimensions of satisfaction with health care and the relationship between satisfaction and disenrollment. A key issue for these analyses was to determine whether Medicare HMO enrollees were more or less satisfied with their medical care arrangements than were fee-for-service beneficiaries and whether joining the HMO resulted in an increase or a decrease in satisfaction compared with the enrollees' degree of satisfaction with their prior arrangements.

C. SATISFACTION IN MEDICARE HMOs

The analysis of degree of satisfaction experienced by Medicare beneficiaries with respect to their health care arrangements revealed that the overwhelming majority of Medicare beneficiaries are "very satisfied." Table IV.1 summarizes the key results from this analysis. Approximately 81 percent of beneficiaries report being very satisfied, and there is no difference in overall levels of satisfaction reported by HMO enrollees and by Medicare beneficiaries in fee-for-service settings.

TABLE IV.1

COMPARISON OF OVERALL AND SPECIFIC SATISFACTION:
ENROLLEES VERSUS NONENROLLEES

Satisfaction Measures	Percent Reporting Highest Satisfaction		
	Enrollees	Nonenrollees	Difference
Overall Satisfaction	80.8	79.3	1.5
Individual Measures			
Professional competence	53.8	63.7	-9.9[a]
Willingness to discuss	57.4	67.0	-9.5[a]
Courtesy	63.5	65.7	-2.2
Travel	71.1	67.9	3.2
Appointment arrangements	78.9	81.5	-2.6
Waits reasonable	72.3	67.9	4.4[b]
Availability of emergency room care[c]	60.5	62.9	-2.4
Experience with claims processing[d]	91.3	60.0	31.3[a]
Summary Measures			
Perceived quality of care	68.9	76.4	-7.5[a]
Perceived access to care	75.4	75.5	-0.1
Number of Respondents	1,175	782	

[a]Significant difference at the 1 percent level, using two-tailed test.

[b]Significant difference at the 5 percent level, using two-tailed test.

[c]At baseline asked of all respondents with regular source of care, at follow-up it was asked of those who used emergency room care.

[d]At baseline asked of all respondents with regular source of care, at follow-up asked of those with claims processing experience.

Source: Rossiter et al. (1988b)

Despite the very comparable levels of overall satisfaction with care reported by the HMO and fee-for-service groups, there were substantial differences between the two groups on specific dimensions of satisfaction. Enrollees were significantly less satisfied than nonenrollees with the perceived professional competence of their providers and with the willingness of HMO staff to discuss problems with them. The difference between HMO enrollees and fee-for-service beneficiaries was relatively large, with roughly 54 to 57 percent of HMO enrollees very satisfied with HMO provider professional competence and willingness to discuss problems, compared with 64 to 67 percent of fee-for-service beneficiaries who reported themselves to be "very satisfied" with these dimensions of their health care arrangements. HMO enrollees, on the other hand, were more satisfied than fee-for-service beneficiaries with regard to two other dimensions of care: the amount of time the patient was kept waiting before he or she was attended to and the time and effort required to process claims. The differences between the two groups on satisfaction with waiting time was small, but statistically significant. Over 90 percent of HMO enrollees were satisfied with claims processing experience compared with only 60 percent of fee-for-service beneficiaries. Most HMOs eliminate or minimize claims processing for enrollees, which contributes substantially to overall enrollee satisfaction.

Comparing satisfaction levels of enrollees and nonenrollees, however, will not give us a complete perspective on how HMO enrollment affects beneficiary satisfaction. To fully assess this effect, we must also consider the level of satisfaction that HMO Medicare beneficiaries had achieved in the fee-for-service sector prior to joining the HMO. The

difference between satisfaction before and after joining the HMO is one measure of the performance of HMOs and their impact on satisfaction. Overall, those beneficiaries who had been more dissatisfied with selected aspects of their fee-for-service health care arrangements were more likely to join an HMO. When beneficiaries' satisfaction with the HMO was compared with their satisfaction with their prior source of care, it is clear that satisfaction increased substantially for HMO enrollees. Only about 64 percent of enrollees were very satisfied with their prior fee-for-service arrangements. After 12 to 16 months of experience in a Medicare HMO, however, 81 percent of enrollees reported being very satisfied. Table IV.2 compares HMO enrollee satisfaction with respect to their prior fee-for-service arrangements--by noting changes in satisfaction levels. Nearly 29 percent of enrollees reported greater satisfaction with the HMO than with their prior fee-for-service arrangements, and only 9 percent reported a decrease in satisfaction. These results provide strong support for a view that, for beneficiaries who join and continue to belong to Medicare HMOs, their satisfaction levels are improved and, overall, they are as satisfied as Medicare beneficiaries who have chosen to remain in the fee-for-service sector.

D. DISENROLLMENT AND SATISFACTION

Disenrollees were excluded from the analysis of satisfaction with health care arrangements in order to maintain comparability between HMO enrollees and fee-for-service beneficiaries who were assumed to have identified their preferred health care arrangements. However, ignoring disenrollees entirely fails to account for the fact that a substantial proportion of Medicare beneficiaries who enroll in HMOs are sufficiently

TABLE IV.2

CHANGE IN SATISFACTION OF MEDICARE COMPETITION DEMONSTRATION ENROLLEES: BEFORE AND AFTER ENROLLMENT

Patient Satisfaction Measures	Percent of Enrollees Reporting Change in Satisfaction[a]			
	Decrease	Increase	Same	Unknown[b]
Overall Satisfaction	9.0	28.8	59.6	2.6
Individual Measures				
Professional competence	20.1	23.2	52.9	3.8
Willingness to discuss	19.1	27.2	49.9	3.7
Courtesy	15.3	25.3	56.6	2.8
Travel	18.7	22.7	55.3	3.3
Appointment arrangements	10.8	15.2	66.8	7.2
Waits reasonable	13.0	25.9	56.9	4.2
Summary Measures				
Perceived quality of care	13.0	22.6	55.0	9.3
Perceived access to care	12.1	19.6	56.9	11.4
Number of Respondents	1,175			

[a]Change from baseline measure for prior usual source of care to followup for HMO enrollment.

[b]Satisfaction item not rated either at baseline or followup.

Source: Rossiter et al. (1988b)

dissatisfied with some aspect of the HMO experience to leave the HMO after some period. In this section, we provide an overview of the results of several studies of the disenrollment experience in Medicare HMOs, with a particular focus on the relationship between satisfaction and disenrollment.

1. Background on Disenrollment in Medicare HMOs

Examination of disenrollment patterns in Medicare HMOs is interesting for a number of reasons. First, Medicare beneficiaries who enroll in HMOs are permitted to disenroll from the HMO at any time. Consequently, Medicare beneficiaries who join without fully understanding the implications of belonging to an HMO have the option of disenrolling immediately upon learning about HMO restrictions. However, those who do disenroll may find themselves without any health insurance or health care provider and thus may experience discontinuity of care and/or substantial out-of-pocket costs during their transitional periods. Both discontinuity and decreased financial access may have negative effects on the overall quality of care that these beneficiaries are able to obtain. Second, disenrollment may be a source of biased selection for HMOs if beneficiaries who are potentially frequent users of services are more likely to disenroll. Systematic disenrollment by frequent users of health services may indicate that some Medicare beneficiaries with significant health problems are not satisfied with how the HMO manages their case and, in addition, may indicate direct actions by some HMOs to encourage disenrollment of high users. Both of these possibilities would suggest that perceived quality of care may be reflected in disenrollment patterns observed among the demonstration enrollees.

The disenrollment research conducted under the Medicare Competition Demonstration Evaluation addressed the following major issues:

- the relationship between disenrollment and dissatisfaction with the HMO service delivery system,
- the role that misunderstanding the implications of HMO health care arrangements plays in the disenrollment decision, and
- differences in the characteristics, attitudes, and health status of disenrollees compared with continuing enrollees.

The data used for this study come from the two beneficiary surveys that have been described earlier in this section, as well as from information on expenditures for health care by these beneficiaries prior to enrolling in the HMO. In all, 305 survey respondents disenrolled from their original HMO by the time of the second survey--approximately 15 percent of the survey sample--excluding those who died. Of these 305, nearly 25 percent disenrolled from the original HMO but subsequently joined another HMO. This latter group should probably be regarded as being dissatisfied with a particular HMO but not dissatisfied with the HMO concept, in general.

2. Findings of Disenrollment Studies

a. Characteristics of Disenrollees.

When the characteristics of disenrollees were compared with those of continuing enrollees, we find that disenrollees were--

- poorer and less likely to have had Medicare supplemental insurance prior to joining the HMO,

- more likely to say that seeing the same physician is important and more worried about their health, in general,
- more likely to have rated their prior source of care as "excellent" and more likely to have felt that the costs of prior health care were reasonable,
- generally in worse health, as measured by the presence of a health problem that may require hospitalization, lower IADL scores, and higher Medicare reimbursements on their behalf during the two years prior to joining the HMO.

Disenrollees, then, are more likely to have characteristics that may be associated with a higher propensity to use health services and may make greater demands on the HMO system. Their greater degree of worry about their health and their stronger preference to see the same physician at each visit may combine with that higher propensity to use services to produce greater dissatisfaction when they encounter HMO restrictions and access barriers.

b. Reasons for Disenrollment

Disenrollees were asked during the survey for their reasons for disenrollment. Approximately one quarter of disenrollees stated that they had disenrolled because they misunderstood one or more of the terms of HMO membership at the time they joined. Almost half of these misunderstandings concerned the necessity for the HMO enrollee to change from their fee-for-service physician to an HMO physician.

Nearly half of all disenrollees reported some dissatisfaction with the HMO, with the largest percentage reporting that the HMO was an inconvenient distance from their place of residence. Nearly 7 percent left the HMO because their physician had left the HMO. Those beneficiaries who disenrolled within three months of joining the HMO were more likely to say

that they disenrolled because of a misunderstanding about the HMO than were those who disenrolled later in their HMO membership. Later disenrollees had a higher overall level of dissatisfaction with the HMO and were more likely to report reasons related to the convenience of obtaining HMO services or to the operational aspects of the HMO.

c. Satisfaction and Disenrollment

To explore in greater detail the relationship between satisfaction and disenrollment decisions, the disenrollee sample was restricted to those who disenrolled due to dissatisfaction with one or more aspects of HMO care or arrangements. Those who disenrolled and returned to fee-for-service arrangements were presumed to be dissatisfied with both the HMO concept and with the specific HMO to which they belonged. Disenrollees who joined another HMO after disenrollment were assumed to be satisfied with the HMO concept but dissatisfied with the specific HMO they had joined. Disenrollees who returned to fee-for-service were less likely to report overall satisfaction with the care that they received from their HMO than were disenrollees who joined another HMO. However, nearly 75 percent of disenrollees to fee-for-service were satisfied, overall, with the HMO that they had left, and 85 percent of disenrollees to another HMO were satisfied with the HMO that they had left. These findings suggest that a large majority of both groups were not dissatisfied with their HMOs in an absolute sense, as much as they were dissatisfied with their HMOs relative to the other options available to them.

Greater differences are found between these two groups on reported satisfaction with specific aspects of HMO care and services, however. A greater percentage of disenrollees to fee-for-service were dissatisfied

with the professional competence and courtesy of the staff at the HMO from which they disenrolled. Disenrollees to another HMO, on the other hand, were more likely to report dissatisfaction with the costs of the HMO from which they disenrolled. Disenrollees to another HMO were also much more likely to report that they disenrolled because their doctor had left the original HMO--a result that highlights again the importance of existing physician-patient relationships in the decision making of Medicare beneficiaries.

d. Analysis of Factors Affecting Disenrollment

While the descriptive analysis provides information about the differences between disenrollees and continuing enrollees in characteristics and satisfaction levels, the extent to which selected factors influence or are associated with disenrollment decisions cannot be determined though descriptive comparisons. To examine the relationship between specific factors and disenrollment decisions of Medicare beneficiaries, we developed and estimated a model of the disenrollment decision. The model assumes that disenrollment is a function of Medicare enrollees' characteristics and attitudes and of the characteristics of the HMO to which they belong as well as the available alternatives.

The results indicate that enrollees who used the HMO's services and were dissatisfied were significantly more likely to disenroll than were those who had not used the services and were not dissatisfied. Enrollees who had continued to maintain their Medicare supplemental insurance policies while enrolled in the HMO also were more likely to disenroll, presumably because their alternatives did not include any period of financial vulnerability upon disenrollment. Enrollees in staff model HMOs

were most likely to disenroll, possibly because staff model HMOs are more restrictive in their choice of physician and location than are most other types of HMOs. Among the variables that indicate an association between health status and disenrollment, only the amount of Part B Medicare expenditures prior to joining the HMO approaches a level of significance that indicates a relationship may exist.

E. DISCUSSION

Beneficiary satisfaction is important to Congress, HCFA, the HMO industry, and to Medicare enrollees. It can be viewed as an indicator of the quality of care being provided by the HMO. In addition, dissatisfaction may lead to disenrollment from HMOs and the consequent disruptions of continuity of care, as well as increased financial vulnerability. Our studies of satisfaction and disenrollment, however, suggest that Medicare HMOs are performing well in comparison to fee-for-service alternatives available to Medicare beneficiaries.

Overall, the analyses of satisfaction and of disenrollment patterns provide a positive view of the performance of HMOs in the Medicare market. Enrolled beneficiaries report satisfaction levels that equal, for the most part, those reported by fee-for-service beneficiaries, and this comparable level of satisfaction represents an increase in satisfaction for a substantial number of enrollees. Although disenrollment is relatively high in our sample, and dissatisfaction is clearly an important factor in the decision of some beneficiaries to leave HMOs, overall levels of satisfaction with HMO care are surprisingly high even for these most unhappy beneficiaries. It is possible that the current disenrollment rules may be an important component of the maintenance of relatively high levels

of satisfaction among Medicare beneficiaries, who may try an HMO option without being forced to remain in an unsatisfactory arrangement for an extended period of time.

V. QUALITY OF CARE[1]

A. OVERVIEW

It is difficult to predict a priori what the effect of capitation will be on quality of care. While a change to the capitation method of payment for services could have an adverse effect on quality of care, that is, if HMOs were to reduce needed services in an effort to cut costs, the quality of care could remain at a high level if only unneeded services were reduced. In fact, quality of care could increase if unneeded hospital admissions are reduced (thus decreasing the probability of iatrogenic illness) and if routine and preventive care is increased in an effort to detect and treat illness early, thereby avoiding the need for expensive hospital treatment.

In the Medicare Competition Evaluation, our focus was on examining whether there was any significant difference between the quality of care that beneficiaries received in the HMOs they joined compared with the quality of care beneficiaries received in fee-for-service arrangements.

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[1]The research summarized in Chapter V is drawn from the following sources:

Brown, B. Final Analysis Report: The Structure of Quality Assurance Programs in HMOs and CMPs Enrolling Medicare Beneficiaries, February 1987.

Retchin, S., and B. Brown. Report on Access and Outcomes in the Medicare Competition Demonstration HMOs and CMPs, May 1988.

Retchin, S., and B. Brown et al., Report on the Quality of the Process of Care in Medicare Competition Demonstration HMOs and CMPs, June 1988.

While we could have chosen to examine quality from the standpoint of how closely the care delivered by HMOs approximated a quality of care "ideal," we chose to use fee-for-service care as the criteria because, regardless of how closely the care provided by HMOs matched up to an ideal (e.g., criteria set by a physician panel), it was fee-for-service and not the ideal that represented the alternative for beneficiaries choosing not to join an HMO.

To analyze quality of care we examined four primary components of HMO services:

- The organizational structures in HMOs that could have an influence on quality of care,
- Beneficiaries' ability to access HMO services,
- The process of care, and
- The extent to which enrollment in an HMO had an impact on beneficiary health status,

The data, approach, and analytic results of each of these components are discussed in this chapter.

B. ANALYSES AND FINDINGS

1. Structural Measures of Quality

To ensure efficient provision and monitoring of quality care in HMOs requires that a formal, well-defined quality assurance program (QAP) be in place and operational. While there are a variety of approaches that might satisfy these requirements, all comprehensive QAPs must include systematic procedures for identifying problems in providing quality care, developing methods for addressing those problems, and following up to ensure that the problem has been resolved. While no evidence to date has

conclusively linked the QAP process to quality outcome, HCFA required each demonstration HMO to have a structured QAP. To determine the degree of compliance and the functioning of the QAP, the evaluation included a case study to examine these issues.

The structural analysis was based on data collected from case studies of 20 demonstration HMOs, which were conducted approximately six months after the HMOs began enrolling Medicare beneficiaries. Key management and clinical staff were interviewed during the case study site visits concerning the types of quality assurance programs that were in place and how these programs would function to detect specific quality of care problems that might occur (i.e., over-referrals to a specialist by a primary care physician, frequent premature hospital discharge, and a high rate of postsurgical pneumonia).

While HCFA had established guidelines for quality of care mechanisms in the demonstrations, we discovered that each of the HMOs had interpreted the guidelines differently. All 20 HMOs appeared to meet HCFA's broad criteria for quality assurance programs, yet the quality assurance systems found to exist in the demonstration HMOs ranged from a very simple system, with the medical director providing utilization review, to hierarchies of individuals and committees performing a variety of quality assurance functions.

Four of the 20 HMOs had no formal quality assurance committee. These four HMOs tended to use their utilization review structures, peer interaction, and patient complaint system to monitor and maintain quality. For these HMOs it is of some concern that utilization review will not detect the full range of potential quality problems that may arise,

although most utilization-related problems would be identified. In contrast, HMOs with formal quality assurance committees used periodic chart reviews, protocol development, and special studies to assess potential and recognized quality of care problems of all types.

Differences in the age of the HMO, its size, origin, Federal qualification status, or model, were not found to be associated with the type of quality assurance systems in place. There were, however, differences among types of HMO with respect to the locus of responsibility for various quality assurance activities. In staff model HMOs all responsibility for quality assurance activities lay within the HMO itself. In contrast, group model HMOs divided the responsibility: most quality assurance activities fell under the purview of the provider group, with the exception of use of services, which was usually shared by the HMO and the provider group. Most individual practice associations (IPAs) divided responsibilities still further, with the HMO taking responsibility for monitoring activities but sharing problem solving and intervention with its physicians.

2. Access to Care

One concern that has been expressed about the appropriateness of HMOs as a delivery system for the Medicare program is that, in order to control utilization, HMOs may create access "barriers" (e.g., primary care gatekeepers, prior authorization requirements) that may be difficult for some to understand and may require a good deal of persistence on the part of enrollees to make sure that their health needs are taken care of. In some cases these barriers may have deleterious effects on Medicare enrollees' health due to the patient's inability to access the care he or

she requires in a timely manner. The Medicare Competition Evaluation addressed the barrier to access issue by analyzing (1) a sample of Medicare beneficiaries' responses to questions about symptoms and access to care in the fee-for-service and HMO systems and (2) the promptness with which recommended treatments were administered (by examining medical records--see section on process of care, below).

Data used to address the beneficiaries view of access came from the baseline and follow-up telephone surveys discussed previously.

Access to care was measured by asking beneficiaries during the baseline interview about symptoms they were experiencing (e.g., shortness of breath, chest pain, persistent cough, etc.). On the follow-up survey, beneficiaries who had reported symptoms were asked whether they had seen a health care professional for their problem and, if not, why not. For the analysis of these data, symptoms were collapsed into "urgent," "semiurgent," and "nonurgent" categories. In addition to comparing enrollees and nonenrollees, a subanalysis was performed on beneficiaries 80 years or older, since any problems with access would be expected to produce the greatest amount of dysfunction in this group.

Both HMO enrollees and fee-for-service enrollees reported very high rates of caregiver follow-up for urgent, semiurgent, and nonurgent symptoms (98 percent of enrollees versus 96 percent of nonenrollees overall). No significant differences were found between enrollees and nonenrollees in the percent of beneficiaries who saw a caregiver for their symptoms, in the analysis by level of urgency, or in the subanalysis of beneficiaries 80 years or older.

3. Process of Care

To examine the clinical aspects of quality of care is a complex and difficult process. However, HCFA believed that the analysis of quality issues in Medicare HMOs would not be complete unless clinical quality also was assessed. An approach to analyzing the quality of the process of care in Medicare HMOs and in fee-for-service settings was developed and data were collected from medical records in eight of the demonstration HMOs and from fee-for-service physicians' offices and hospitals in the HMO market areas.

In this portion of the study we examined the routine medical care provided to HMO enrollees and fee-for-service beneficiaries, as well as the care provided to beneficiaries with one of two resource-intensive medical conditions: congestive heart failure and colo-rectal cancer.

The tracer conditions and the criteria used in the medical record review were established by physician panels. Panel members included physicians from the specialty fields of oncology, cardiology, and geriatrics. In addition, physician panel members were selected to provide a balance of fee-for-service and HMO experience as well as a mix of clinical and research skills.

While the extent to which medical records were complete and showed good documentation concerning diagnosis, treatment, follow-up, referrals, etc., influenced the process of care analysis, the panel attempted to choose criteria for which documentation would be expected if good quality of care took place.

a. Routine Care

The routine care provided to beneficiaries was examined through a review of 1,590 medical records (777 fee-for-service patients and 813 HMO patients), which were randomly selected from the eight HMOs and from fee-for-service provider records. For the HMO sample, 54 percent of the records were from staff or group model plans and 46 percent were from IPA or network model plans.

Ambulatory records for the routine care sample were examined for the following elements: physical examinations, history taking, performance of screening tests, immunizations, follow-up of abnormal lab results, detection of serious illness, and management of diabetes mellitus and diastolic hypertension.

Significant differences were found between HMO enrollee records and fee-for-service records in a number of areas. HMO enrollee records evidenced better medical history taking, more complete physical examinations, more screening tests, and a greater frequency of immunizations than fee-for-service records. No significant differences were found between the HMO and fee-for-service samples in terms of follow-up on abnormal test results or the detection of serious illness.

The two groups also were similar in terms of prevalence of hypertension and diabetes mellitus: Approximately 27 percent of both groups had hypertension and 17.6 percent of fee-for-service beneficiaries versus 19.9 percent of HMO enrollees were diagnosed with diabetes mellitus. The study found no difference between the two groups of beneficiaries in how diabetes mellitus was managed--except that HMO

providers were more likely to perform urinalysis on and to refer to an ophthalmologist those patients whose diabetes was poorly controlled.

Greater differences were noted, however, in the treatment of hypertensives, with HMO providers being more likely to document medical history taking, physical examination, laboratory tests, and interventions. HMO patients, however, were significantly more likely than fee-for-service patients (59.8 percent vs. 46.1 percent, $p<.01$) to have "poor control" of blood pressure at follow-up. It appears that HMO providers were more likely to take a conservative approach to treatment (e.g., dietary counseling and weight loss) than their fee-for-service counterparts. In cases where medication was prescribed, there was no difference between the two groups in terms of adjusting medications for patients with uncontrolled hypertension at follow-up (94.7 percent, fee-for-service, vs. 96.2 percent, HMO).

b. Resource-Intensive Conditions

We also reviewed medical records to examine the quality of care provided to 170 HMO enrollees and 191 fee-for-service beneficiaries who had been hospitalized with the diagnosis of congestive heart failure (CHF), as well as 149 HMO enrollees and 182 fee-for-service beneficiaries who had been hospitalized with the diagnosis of colo-rectal cancer (CRC). Both inpatient and ambulatory care physician records were reviewed for this portion of the study.

Congestive heart failure. In our analysis of the abstracted CHF records we found no significant differences between HMO and fee-for-service cases in terms of current and past medical histories taken and the physical examination given during patients' initial visits. In terms of ambulatory

management, HMO physicians were significantly more likely to advise dietary salt restriction, while fee-for-service physicians were almost twice as likely to modify medication for those patients with uncontrolled blood pressure.

Although the point at which CHF cases with clinical deterioration were hospitalized was similar for most symptoms, HMO physicians were almost three times more likely than fee-for-service physicians to admit to the hospital within 24 hours when patients displayed an increase in angina and did not respond to medication. No differences were found in the timeliness of diagnostic studies performed prior to hospitalization.

In terms of inpatient management, no significant differences were found between the two groups in prescribing or monitoring therapies. Differences were found when we examined physician follow-up after hospital discharge: HMO physicians were found to schedule follow-up visits within one week of discharge much more frequently than fee-for-service physicians (42 percent vs. 27 percent).

Colo-rectal cancer. In the initial evaluation of CRC patients, HMO practitioners were significantly more likely than fee-for-service practitioners to document history taking (66 percent vs. 52 percent) and to perform an endoscopic or radiologic procedure (93 percent vs. 90 percent). No significant differences were found regarding the stage of the cancer at the time of diagnosis or operative procedure. Unlike the findings for CHF, there were no significant differences between HMO and fee-for-service patients in terms of follow-up after surgery.

4. Impacts on Health Status

To assess whether enrollment in an HMO had an impact on health status and disability, enrollee and fee-for-service comparison groups were administered a series of questions on health status, including Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL) scales on both the baseline and follow-up beneficiary surveys.

The examination of these data focused on the changes in health and disability status between the baseline and follow-up surveys. The analysis was performed by examining ADL and IADL item responses from the baseline and follow-up surveys for individual beneficiaries, and then determining whether there was a worsening of health status (i.e., whether there was a decline in any individual ADL or IADL item on the scales) between baseline and follow-up. As with the access study, in addition to an overall comparison of enrollees and fee-for-service beneficiaries, a subanalysis was done for the group of beneficiaries 80 years of age or older.

Results of the analysis revealed there were no significant differences between the two groups in the percent of beneficiaries whose health status worsened between baseline and follow-up surveys, nor were there any significant differences in the percentage who showed "no change" in health status. Fee-for-service beneficiaries were more likely than enrollees to have worsened in their "ability to shop for groceries or clothes." In addition, no significant differences in changes in IADLs for the enrollee and fee-for-service group members 80 years and older were found. Finally, changes in disability were considered by examining the number of annual bed days, the number of bed days over 2 weeks prior to the survey, and the number of restricted activity days. At follow-up the

number of bed days was significantly different between the 2 groups, with HMO enrollees experiencing a marked increase (+1.99 days) in the number of annual bed days compared to FFS beneficiaries (-.15 days). However, when baseline differences in health status were controlled for using multiple linear regression, these differences by enrollment status were only of marginal significance ($p = .10$).

Since these comparisons used data that were unadjusted for differences between the two groups in terms of personal characteristics, logit models were developed using the variables on which the two groups differed during baseline as independent variables and measures of health status as dependent variables. Results of this analysis supported the descriptive comparisons in that enrollment in an HMO was found to be not significantly associated with health status changes at the time of follow-up.

C. DISCUSSION

While concern has been expressed that the incentives of capitation may lead physicians to limit beneficiary access to needed services and to undertreat beneficiaries in an effort to reduce costs, there is no evidence of this occurring on a widespread basis according to the analyses of quality of care conducted for the Medicare Competition Evaluation.

The findings from these analyses of quality of care indicate that the quality of care received by beneficiaries who enrolled in the demonstration HMO plans was at least equal to the quality of care received by beneficiaries in the fee-for-service sector in terms of the access beneficiaries had to treatment, the response of physicians to medical

problems, the process of care provided to beneficiaries undergoing treatment, and the outcomes of treatment.

Our findings do suggest, however, that the structural mechanisms that some of the demonstration HMOs had in place for detecting quality of care problems may have been designed more to detect over-utilization than quality of care problems. This may represent an area of HMO performance that can be improved in the future. Even though, overall, quality of care does not seem to have suffered as a result of capitation, there is much anecdotal evidence of individual beneficiaries who experienced poor quality of care from some demonstration HMOs (Heinz, 1987).

While our analyses suggest that the chances of receiving poor quality of care is no higher for HMO enrollees than for beneficiaries who receive their care in the fee-for-service sector, HMOs are perceived as having an incentive to undertreat beneficiaries. In order to counter this perception and minimize cases of individual physicians providing insufficient or poor quality of care, HMOs need to make an effort to develop and maintain organizational structures that are more clearly focused on preventing and detecting quality problems.

Such structures may already exist in the TEFRA program HMOs. With the experience gained from the demonstrations and a number of years of operation under TEFRA, both the HMOs and HCFA's Office of Prepaid Health Care (OPHC) may have made significant progress in establishing and monitoring HMO compliance with quality of care mechanisms and structures to prevent and detect individual quality of care problems. This issue will be examined further in the Evaluation of the TEFRA HMO and CMP Program.

Regarding the issue of incentives to undertreat, it is important to keep in mind that fee-for-service care providers may have just as strong an incentive to overtreat beneficiaries as HMO care providers have to undertreat. Overtreatment may also result in poor quality care and negative outcomes, particularly among the elderly, from the risks associated with treatments and the possibility of the patient developing iatrogenic illness. In addition, while HMO physicians have some accountability to the HMO for the quality of care they provide (however informal the HMO monitoring system may be), there is no equivalent accountability for fee-for-service physicians.

VI. USE AND COSTS OF SERVICES[1]

A. OVERVIEW

Federal policy encouraging the development of HMOs and CMPs in the Medicare market has been based upon an assumption that, since HMOs receive a fixed capitation payment, they face incentives to constrain use of services and to operate efficiently (e.g., substituting lower-cost services for more expensive services, when appropriate). If HMOs are able to contain costs through controls on service use, they will be able to compete effectively with the fee-for-service sector which, in response, may modify its behavior in ways that will benefit both HCFA and Medicare beneficiaries. To the extent that the Medicare Competition Demonstration HMOs and CMPs are found to be cost-effective vehicles for providing Medicare benefits, this finding would have significant implications for the future as HMOs operate in the Medicare market under the TEFRA regulations.

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[1]The research summarized in Chapter VI is drawn from the following sources:

Langwell, K., et al. First Annual Report. Medicare and HMOs: A History and Review of Early Experience, November 1985.

Brown, R., et al. Second Annual Report: National Medicare Competition Demonstrations Evaluation, April 1987.

Rossiter, L., et al. Third Annual Report: National Medicare Competition Demonstrations Evaluation, May 1988.

Nelson, L., L.F. Rossiter, et al. A Preliminary Analysis of the Use and Cost of Services: Aggregate HMO Data, June 1986.

Nelson, L. and R. Brown. Report on the Use and Costs of Services in Medicare Competition Demonstration HMOs and CMPs, January 31, 1989.

Understanding the mechanisms through which HMOs achieve cost savings in serving Medicare beneficiaries, however, is also important in order to ensure that Medicare beneficiaries do not suffer adverse outcomes that are associated with reduced or changed use patterns. If observed use of services is lower for Medicare HMO enrollees than for fee-for-service Medicare beneficiaries, due to biased selection (i.e., enrollees are systematically more likely to use fewer services than nonenrollees due to differences in health status or to "tastes" for care), then the HMO's effect on use and costs of medical care may be insignificant. Instead, only differences in the characteristics of enrollees and nonenrollees are being reflected in the comparative use and costs results. Evidence of substantial favorable selection into HMOs would suggest that the Medicare HMO program may result in windfall gains to participating HMOs and, perhaps, segmentation of the Medicare market. It is equally important, however, that "adverse" selection be detected and measured if that is occurring in some HMOs, since the presence of adverse selection in any systematic way among HMOs participating in the Medicare market may result in low HMO participation in the program, in the long run, and could cause disruption of care for beneficiaries enrolled in HMOs that choose to terminate their risk contracts.

To evaluate the impact of the Medicare Competition Demonstrations on use and costs of services, several studies were undertaken:

- Annual descriptive profiles of utilization patterns in the demonstration HMOs and CMPs for 1984, 1985, and 1986;
- An analysis of the nature and extent of biased selection into the Medicare HMOs and CMPs, during the demonstration period;

- An analysis of individual beneficiary use and cost experiences in the Medicare Competition Demonstration HMOs and CMPs, taking into account selection bias, and comparing these beneficiaries' experiences with the experiences of a comparison sample of Medicare beneficiaries who did not enroll in HMOs.

In this chapter, we report the key findings from each of these separate, though related, analyses. In the final section, we assess what we know about the impact of Medicare HMOs on Medicare beneficiaries use and costs of services and future program directions that may be usefully pursued.

B. UTILIZATION PATTERNS, 1984 THROUGH 1986

The demonstration HMOs and CMPs submitted Quarterly Demonstration Reports to HCFA through the end of 1984 and, under the permanent TEFRA program, submitted somewhat less detailed Annual Reports to the Office of Prepaid Health Care of the Health Care Financing Administration. These reports contained data on use of basic Medicare benefits over the period 1984 through 1986. In addition, the 1984 demonstration reports contained data on use of supplemental benefits that were offered by the HMOs and CMPs to Medicare beneficiaries.

Before presenting the results of the examination of use patterns over time, it is interesting to review the HMOs' projections of hospital use during the initial demonstration year. Table VI.1 shows projected and actual 1984 hospital utilization for 16 of the 20 demonstration HMOs. The average hospital use projection for all plans was 2,965 hospital days per 1,000 enrollees annually. This figure may be compared with the 1984

national average hospital use of 4,004 per 1,000 Medicare beneficiaries. The projections range from a high of 4,013 to a low of 2,000.

Of the 16 demonstration HMOs for which we had data on initial projections and hospital use, 13 reported hospital use during 1984 that was less than the projected hospital days per 1,000 enrollees. For-profit plans, IPAs, and those plans with no prior Medicare experience projected higher hospital utilization than did other demonstration plans. The three plans that did not initially meet their utilization targets were somewhat younger and more likely to be traditional IPAs than other demonstration HMOs. Overall, the first-year experience of the demonstration HMOs in the Medicare market was within their expectations for hospital use and, in fact, was quite positive. The usefulness of these data was somewhat limited, however, since there is reason to believe that hospital use patterns may be quite different in the early months of HMO enrollment than would be observed later. Our subsequent analysis of 1985 and 1986 hospital use provided some support for this view.

Utilization rates by specific HMO are presented for 1984, 1985, and 1986 in Table VI.2, for the HMOs that submitted data for all three years. These data were obtained from OPHC for 1985 and 1986, and comparison with alternative HMO sources confirmed that for hospital use measures, OPHC data and the HMOs' demonstration reports are consistent. There are substantial differences, however, between OPHC data and the demonstration reporting data for ambulatory service use. Consequently, ambulatory service use is reported only for 1985 and 1986 and is based upon OPHC reports.

TABLE VI.2

UTILIZATION RATES EXPERIENCED BY MEDICARE COMPETITION DEMONSTRATION HMOs AND CMPs 1984 to 1986

Health Plan	Hospital Days/1,000 Person Years				Hospital Admissions/1,000 Person Years				Average Length of Stay				Ambulatory Encounters/Person Year		
	1984	1985	1986	Average Percent Change 84-86	1984	1985	1986	Average Percent Change [a] 84-86	1984	1985	1986	Average Percent Change [a] 84-86	1985	1986	Average Percent Change 85-86
Plan Mean															
--All Plans	2,252 (N-18)	2,107 (N-21)	1,895 (N-17)	-8.3%	303 (N-15)	297 (N-20)	258 (N-17)	-7.7%	7.8 (N-15)	7.2 (N-20)	7.4 (N-17)	-2.6%	12.9 (N-19)	12.9 (N-14)	0.0%
--Plans Reporting Data All Three Years	2,059 (N-12)	2,000 (N-12)	1,821 (N-12)	-6.0%	268 (N-11)	266 (N-10)	243 (N-10)	-4.8%	7.8 (N-11)	7.3 (N-10)	7.5 (N-11)	-1.9%	13.5 (N-14)	12.9 (N-14)	-4.6%
AV-MED	1,640	2,157	2,219	16.3%	256	304	308	9.7%	6.4	7.1	7.2	6.1%	8.6	13.8	60.8%
CAC	1,566	1,740	1,382	-5.8%	180	218	197	4.7%	8.6	8.0	7.0	-9.8%	8.0	12.3	54.7%
HealthAmerica	1,935	1,387	1,174	-22.1%	317	283	261	-9.3%	6.1	4.9	4.5	-14.1%	12.2	14.8	22.0%
South Florida Group Health	3,805	2,520	2,312	-22.0%	418	332	282	-17.9%	9.1	7.6	8.2	-5.1%	18.7	16.1	-13.8%
IHC	2,043	1,561	1,604	-11.4%	235	233	229	-1.2%	8.7	6.7	7.0	-10.3%	10.6	10.5	-1.2%
Healthway	2,443	2,775	--	--	310	455	--	--	7.9	6.1	--	--	8.8	--	--
Medical East	2,770	2,488	2,030	-14.4%	287	--	242	-8.2%	9.7	--	8.4	-6.9%	8.6	8.5	-1.7%
Central Massachusetts	3,845	2,995	--	--	509	377	--	--	7.5	7.9	--	--	19.8	--	--

TABLE VI.2 (continued)

Health Plan	Hospital Days/1,000 Person Years				Hospital Admissions/1,000 Person Years				Average Length of Stay				Ambulatory Encounters/Person Year		
	1984	1985	1986	Average Percent Change 84-86	1984	1985	1986	Average Percent Change [a] 84-86	1984	1985	1986	Average Percent Change [a] 84-86	1985	1986	Average Percent Change 85-86
Fallon	1,929	1,939	--	--	--	266	--	--	--	7.3	--	--	8.2	--	--
Medical West	2,079	2,369	2,597	11.8%	207	258	273	14.9%	10.1	9.2	9.5	-3.0%	8.2	8.6	5.1%
FHP	1,401	1,532	1,053	-13.3%	276	270	180	-19.3%	5.1	5.7	5.9	7.2%	19.3	19.1	-1.2%
United Health Plan	1,700	1,660	--	--	--	208	--	--	--	8.0	--	--	4.5	--	--
Health Care Network	--	1,602	2,460	--	--	170	240	--	--	9.4	10.2	--	2.9	3.5	22.3%
Group Health of S.E. Michigan	1,790	2,599	2,209	11.1%	270	297	233	-7.1%	6.6	8.8	9.5	20.0%	--	--	--
Preferred Health Plan	--	2,701	2,274	--	--	380	274	--	--	7.1	8.3	--	--	13.2	--
Metropolitan Health	1,874	1,606	1,552	-9.0%	287	256	243	-8.0%	6.5	6.3	6.4	-0.8%	8.9	--	--
HealthPlus	3,139	--	--	--	362	--	--	--	8.7	--	--	--	--	--	--
Genessee Valley Group Health	1,951	1,903	1,960	0.2%	210	211	228	4.2%	9.3	9.0	8.6	-3.8%	7.2	9.0	24.5%
Choicecare [b]	2,779	3,018	N/A	N/A	421	437	N/A	N/A	6.6	6.9	N/A	N/A	18.7	N/A	N/A
HealthOhio	1,859	2,137	1,763	-2.6%	--	428	358	--	--	5.0	4.9	--	15.2	14.4	-5.0%
Crossroads	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE VI.2 (continued)

Health Plan	Hospital Days/1,000 Person Years				Hospital Admissions/1,000 Person Years				Average Length of Stay				Ambulatory Encounters/Person Year		
	1984	1985	1986	Average Percent Change 84-86	1984	1985	1986	Average Percent Change [a] 84-86	1984	1985	1986	Average Percent Change [a] 84-86	1985	1986	Average Percent Change 85-86
Group Health Service Plan	--	1,439	2,023	--	--	268	287	--	--	5.4	7.1	--	8.4	9.9	18.3%
Share	--	2,120	1,446	--	--	290	220	--	--	7.3	6.6	--	47.3	27.0	-43.0%
French Hospital	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Maxicare	--	--	2,165	--	--	--	338	--	--	--	6.4	--	14.0	12.9	-7.9%

[a] Annual percentge changes include hmos which submitted both 1984 and 1986 OHMO reports.
[b] ChoiceCare did not renew it's 1986 risk contract. the means and 1984 to 1986 percentage changes do not include ChoiceCare's 1986 utilitization rates.

SOURCE: Rossiter et al. (1988)

Although the hospital use experience of individual plans over this period varied considerably, the overall mean for the 12 plans reporting in all three years declined from 2,059 days per 1,000 enrollees in 1984 to 1,821 days per 1,000 in 1986, representing an average annual percentage reduction of 6.0 percent (and an 11.6 percent reduction overall). Three-quarters of the total reduction in mean hospital use rates over this period occurred between 1985 and 1986. The principal source of the decline in mean use rates was a reduction in mean admission rates rather than a trend toward shorter lengths of stay. Similar patterns of declining mean hospital use rates are observed when 1985 and 1986 use rates are compared for the 16 HMOs that reported data for both years. The mean for these plans declined from 1,991 days per 1,000 enrollees in 1985 to 1,873 days per 1,000 enrollees in 1986, a reduction of 5.9 percent.

HMOs' experiences with ambulatory encounters for 1985 and 1986 are also presented in Table VI.2. The 1986 mean for all HMOs studied is 12.9 encounters per person year. The data show a wide range in number of ambulatory encounters across HMOs. There is only a slight decrease, overall, between 1985 and 1986 in ambulatory encounters for those HMOs for which both years of data are available and, in fact, about half of the HMOs reported increases and half reported decreases in ambulatory use between 1985 and 1986.

From the analysis of utilization patterns over time for demonstration HMOs and CMPs, the following observations can be drawn:

- Demonstration HMOs and CMPs were initially overly pessimistic about their ability to constrain hospital use by Medicare beneficiaries. Even in the initial year of operation in the Medicare market, however, the majority of demonstration HMOs experienced substantially

fewer hospital days per 1,000 Medicare enrollees than they had projected at the beginning of the demonstration period.

- Over time, there appears to have been a consistent pattern of declining hospital days per 1,000 enrollees in the demonstration HMOs. This decline is primarily the result of a reduction in admissions per 1,000 beneficiaries rather than a decline in average length of stay.

- Ambulatory encounters, however declined somewhat between 1985 and 1986 in the demonstration HMOs, but the pattern across HMOs was erratic and permits little generalization to the trends that may be observed over time in the TEFRA HMO and CMP program.

Clearly, HMOs and CMPs are providing fewer hospital days to Medicare beneficiaries than are being provided in the fee-for-service sector and, between 1984 and 1986, the HMOs demonstrated an ability to constrain hospital use to an even greater extent than in the initial demonstration year. This reduction over time in mean rates of hospital use among Medicare enrollees in the demonstration HMOs could be the result of a number of factors, including (1) greater effectiveness by the HMOs at constraining hospital use; (2) a general shift toward a healthier mix of enrollees; and/or (3) an initial "start-up effect" of high use rates for new enrollees that tends to decline with increasing duration of HMO membership. The extent to which these or other factors contributed to the decline in mean rates of hospital use cannot be determined from the aggregate data used in this analysis, but has been examined in greater depth in the individual level use and cost analysis, which is reported in the final section of this chapter.

C. ANALYSIS OF THE IMPACTS OF THE MEDICARE COMPETITION DEMONSTRATIONS ON USE AND COSTS OF SERVICES.

The analysis of the impacts of the Medicare Competition Demonstrations on use and costs of services was a critical aspect of the evaluation. If HMOs are to be successful in the market for Medicare services, they must be able to control use of service use and the costs of services provided to Medicare beneficiaries sufficiently that they can break even while receiving payments that are 95 percent of the fee-for-service average in their counties of operation. HMOs may achieve these savings through a number of mechanisms:

- Comprehensive utilization control procedures (e.g., primary care gatekeeper, prior authorization requirements, discharge planning);
- Financial incentives to providers (e.g., capitating primary physicians, negotiating per diem rates with hospitals) that reward restraint in using services;
- Efficiency in the mix of services and in the provision of any given service by the lowest-cost appropriate provider; and
- Prudent buyer approaches, including purchasing in bulk, negotiating volume discounts, using market power to extract greater discounts from health care providers than are offered to other insurers or third-party payers.

HMOs may also be financially successful in the Medicare market if they are able to attract a healthier mix of enrollees than the norm for their market area. This "favorable selection" may occur for reasons that have to do with Medicare beneficiaries' preferences for style of care and degree of attachment to fee-for-service providers or may be influenced by the HMOs' marketing practices and success at targeting healthier beneficiaries.

Medicare HMOs receive 95 percent of the Adjusted Average Per Capita Cost (AAPCC) of care for Medicare beneficiaries in each county of residence, grouped by age-sex-disability-Medicaid-institutional status. Efficient HMOs that offer strong utilization controls and financial incentives to providers may well be able to generate a substantial surplus, which can then be converted into improved benefits and reduced cost sharing for Medicare enrollees and a "reasonable" profit margin for the HMOs. In this case, the HMO is better off financially, Medicare beneficiaries have an enriched benefit package at low out-of-pocket cost, and the Federal government will save by paying only 95 percent, rather than 100 percent, of the AAPCC.

However, if biased selection is present in this market, the outcome is not so clearly beneficial to all parties. If HMOs attract a disproportionately sicklier segment of the Medicare population, they will suffer financial losses and eventually terminate their risk contracts. Medicare beneficiaries who enroll in these HMOs with adverse selection may, in the short run, benefit by the reduced cost sharing and additional benefits available to them. If the HMO then terminates its contract, though, these beneficiaries may suffer from discontinuity of care, if they must change providers as a result. On the other hand, if HMOs attract a favorable mix of beneficiaries, the HMO and the Medicare beneficiaries may benefit financially from these circumstances, but the Federal government will bear increased costs, as they pay more for HMO enrollees than the costs that Medicare would have incurred for these individuals had they remained in the fee-for-service sector. Understanding the impact of Medicare HMOs on use and costs of services by Medicare beneficiaries requires attention both to

the selection of beneficiaries into HMOs and to the management of care provided to beneficiaries enrolled in HMOs, after accounting for selection bias. The Evaluation of the Medicare Competition Demonstrations has focused on these interrelated issues.

1. Biased Selection in the Medicare Competition Demonstrations

The examination of the nature and extent of biased selection in the Medicare Competition Demonstrations focused on three measures of biased selection:

1. Comparison of enrollees to nonenrollees on prior use of health services under the Medicare program;
2. Comparison of enrollees and nonenrollees post-enrollment period mortality rates; and
3. Comparisons of patterns of prior reimbursement experience for disenrollees and continuing enrollees.

In addition, as background to the detailed analysis of biased selection, a descriptive examination of the characteristics of enrollees and nonenrollees in Medicare HMOs was conducted using data from the baseline survey of HMO enrollees and of nonenrollees residing in the same market areas who chose not to join an HMO when the opportunity presented itself. Results of that descriptive study (reported in detail in Chapter III, above) suggested that enrollees in Medicare HMOs were significantly different from nonenrollees in a number of ways. In contrast to nonenrollees, enrollees were younger, poorer, more dissatisfied with their prior source of care, more worried about their health, and in excellent (self-reported) health. Nonenrollees, on the other hand, were more likely to be in nursing homes, Medicaid eligible, seeing a regular physician,

confined to bed during the two weeks previous to the survey interview, aware of a health problem that they thought might require hospitalization, and had more out-of-pocket expenditures for health care in the previous year. These differences suggested that enrollees were healthier and were, in some respects, less likely to have sought or obtained health care prior to joining the HMO. The full analysis of biased selection in the Medicare Competition Demonstrations was intended to investigate the nature and extent of the differences between enrollees and nonenrollees in health status and use of services prior to joining a Medicare HMO.

When data on prior reimbursements under the Medicare program in the two preceding years were compared for HMO enrollees and nonenrollees, the results were quite striking. For the two-year pre-enrollment period, average total Medicare reimbursements per enrollee across all HMOs was 21 percent below the AAPCC-adjusted average reimbursement for nonenrollees. The differences vary widely across HMOs and are significantly different from zero for 14 of the 17 demonstration HMOs. One HMO experienced enrollment of beneficiaries with prior reimbursements under Medicare that were 26 percent higher than the nonenrollee mean in their market area. This HMO reported substantial financial losses and terminated its Medicare risk contract in December 1985. In the other 13 demonstration HMOs, enrollees had significantly lower mean reimbursements than nonenrollees, even after adjustment for the fact that nonenrollees had different average AAPCC risk factors. The range for these 13 HMOs was from 18 percent lower to 43 percent lower prior reimbursements than nonenrollees. IPA and Mixed Model HMO enrollees were, on average, more similar to nonenrollees in their prior reimbursement patterns than were Group and Staff Model HMO

enrollees. The only plan with adverse selection, based on prior reimbursements, was an IPA, and the three HMOs that appeared to have neutral selection (i.e., there was no significant difference between prior reimbursements of their enrollees and nonenrollees in their market areas) were Mixed Model and IPA HMOs. Thus, even among IPAs and Mixed Model HMOs, one half experienced favorable selection based upon prior reimbursement comparisons.

Similar conclusions about the nature and extent of biased selection into these demonstration HMOs emerge when post-enrollment mortality rates were compared for enrollees and nonenrollees. Mortality is a significant contributor to overall costs of health care, since 28 percent of total expenditures under the Medicare program are for the approximately 5 percent of beneficiaries who die each year. An HMO that enrolls a lower than average proportion of these terminally ill individuals is much more likely to have experienced favorable overall selection. While there are some potential drawbacks to interpreting mortality rate differences as indicators of biased selection (e.g., HMO enrollees might have lower mortality rates because HMO styles of care are different from fee-for-service styles of care), the analysis of biased selection included comparison of mortality rates for enrollees and nonenrollees. The results of that analysis showed that mortality rates were lower for enrollees than for nonenrollees in all the demonstration HMOs, although the difference was statistically significant only for 12 of the 17 HMOs. Overall, the enrollee mortality rate was nearly 25 percent lower than the nonenrollee mortality rate.

While the general finding of favorable selection was consistent for the prior reimbursement results and the mortality results, there was some variation in the results by demonstration HMO. The most striking difference was that the one HMO that clearly had experienced adverse selection based on prior reimbursements experience appeared to have experienced favorable selection based upon the mortality results. The actual experience of that HMO--high utilization of services by beneficiaries, eventually causing the HMO to terminate its Medicare contract--suggests that the results based upon prior reimbursements may be a more accurate reflection of biased selection than are mortality rates.

Finally, the effects of disenrollment patterns on the extent of biased selection in the Medicare Competition Demonstrations also was examined. The characteristics of an HMO's members at any point in time is determined not only by who joins the plan but also by who remains enrolled. Disenrollment patterns are especially important for this evaluation because such a large proportion of Medicare members disenroll: nearly 30 percent of first-time enrollees in the demonstration HMOs disenrolled within 24 months after joining.

The effects of disenrollment on biased selection in the Medicare Competition Demonstrations was examined by comparing the pre-enrollment reimbursements of disenrollees to those enrollees who remained in the HMOs for 24 months or until death, and by revising the enrollee-nonenrollee comparison of prior reimbursements to account for differences among enrollees in the length of time enrolled. Again, the results were striking and strongly supported a finding that most HMOs experienced favorable selection during the demonstration period. In every demonstration HMO,

those who disenrolled had average prior reimbursements that were greater than the mean for those who were continuously enrolled. Overall, disenrollees' prior reimbursements were more than 50 percent higher than prior reimbursements for continuing enrollees. Thus, the biased selection arising at the time of enrollment in the demonstration HMOs appears to have been exacerbated by the subsequent patterns of disenrollment that have occurred in the demonstration program.

The results of the analysis of biased selection provide strong evidence that the demonstration plans experienced substantial favorable selection in enrollment and that the mix of enrollees became even more favorable over time as substantial numbers of higher use profile beneficiaries disenrolled over the subsequent two years. The bias appears to have been substantially greater for Group and Staff Model HMOs than for IPAs and Mixed Model HMOs, but there also appears to have been substantial variation even among IPAs and Mixed Model HMOs. The implications of these findings are two-fold:

1. It appears that the Medicare program has paid more to HMOs on behalf of enrollees than the costs that would have been incurred had the beneficiary chosen to remain in the fee-for-service sector.

2. Simple comparisons of enrollee and nonenrollee use and costs of services, adjusting for AAPCC factors, are not enlightening since enrollees appear to be individuals who are systematically more likely to use fewer services than are nonenrollees.

The individual-level analysis of use and cost impacts of the Medicare Competition Demonstrations program, reported in the next section, incorporates the results of the biased selection analysis in order to determine the extent to which HMOs have been able to affect actual use and

costs of services. In addition, the analysis provides estimates of the magnitude of the loss to the Medicare program that has occurred as a result of the pronounced favorable selection that has been identified during the demonstration period.

2. Use and Cost Impacts

The analysis of the impacts of the Medicare Competition Demonstrations on the use and costs of services provided to enrolled Medicare beneficiaries, after adjusting for biased selection into these demonstration HMOs and CMPs, was conducted in two stages. First, the impact of the demonstration HMOs on enrollees use of services was examined. Due to severe limitations of the HMOs' abilities to report individual beneficiary use data for ambulatory services, the analysis of use impacts focuses on hospital service use. This limitation makes it impossible to examine the issue of substitution of ambulatory services for inpatient services; on the other hand, nearly all studies of the impact of HMOs on use of services by younger enrollees have found that HMO membership has an effect on hospital use but little consistent impact on ambulatory service use. The use impacts analysis also examines the use of skilled nursing facilities and of home health agency services by individual beneficiaries, to permit some consideration of substitution issues. Finally, service use patterns of enrollees and nonenrollees who died during the study period are examined, in order to determine whether membership in HMOs affects the frequency with which very high-cost, older enrollees use services.

To examine the impact of the Medicare Competition Demonstrations on costs to the Medicare program, a model was developed and estimated to determine the level of expenditures that the Medicare program would have incurred for HMO enrollees had they remained in the fee-for-service sector. This estimated cost is then compared to the average reimbursements experienced by nonenrollees with the same characteristics in the HMO market areas, in order to determine the proportional difference between what HCFA would have paid and what costs would have been incurred.

a. Impacts on Inpatient Use

Results of the hospital use impact analysis indicate that, as a group, the nine HMOs for which data were available had no impact on hospital use in enrollees' initial year of enrollment, but were successful in reducing hospital use rates in the second year by an amount in the range of 14 to 28 percent. This reduction in hospital use in the second year was due to lower admission rates rather than to shorter lengths of stay. The experience of individual HMOs varied considerably, however. During the first enrollment year, five HMOs achieved reductions in hospital admission rates, two had no statistically significant impact on admission rates, and two HMOs experienced significantly higher admission rates than would have been expected based on enrollees' prior use experience. In the second year, three HMOs had no statistically significant impact on admission rates, while three other HMOs reduced admission rates by at least 25 percent. Two HMOs that had reduced admission rates in the first year could not be included in the analysis of impacts in the second year due to lack of data.

When Skilled Nursing Facility (SNF) and Home Health Agency (HHA) use by HMO enrollees are compared with the pre-enrollment use of these services by these beneficiaries, and with the use by nonenrollees, the results suggest that Medicare HMOs may be substituting SNF days for hospital days. While enrollees used fewer SNF days than nonenrollees prior to their HMO enrollment--43 days per 1,000 versus 248 days per 1,000--the post-enrollment use of SNF services was dramatically higher for enrollees. For the demonstration HMOs as a group, the post-enrollment SNF use rate for enrollees was 609 days per 1,000 enrollees, more than twice the nonenrollee rate of 303 days per 1,000. The rate of SNF use by enrollees increased relative to that of nonenrollees from the pre- to the post-enrollment period in every HMO examined, and the post-enrollment use rate for enrollees was higher than that of nonenrollees in three of the five reporting HMOs (although the difference was statistically significant in only one HMO).

For the HHA use analysis, only two HMOs were able to provide data that could be compared with nonenrollee use of these services. The results of the comparison of enrollee and nonenrollee HHA use, pre- and post-enrollment, indicate that, for these two HMOs, there was no evidence of any change in enrollee use of HHA services under risk contracting.

Comparison of service use by enrollees and nonenrollees who died during the post-enrollment period revealed that enrollees who died were three years younger than nonenrollee decedents, on average, and had significantly lower levels of prior use of services before joining an HMO. Overall, 3,869 hospital days were used per 1,000 enrollee decedents prior to joining the HMO compared with 6,286 days per 1,000 nonenrollees

who subsequently died. Their post-enrollment use, prior to death, was somewhat more similar: enrollee decedents used 14,582 days of hospital care per 1,000 decedents compared with 19,607 days per 1,000 nonenrollee decedents. Enrollee decedents used over twice as many SNF days as were reported for nonenrollee decedents--5,190 per 1,000 compared with 2,183 per 1,000--which again suggests that HMOs may be substituting SNF services for hospital services in some cases.

b. Impacts on Medicare Costs

The analysis of the impact of risk contracting on Medicare program costs required comparison of the actual costs incurred for enrollees in the follow-up period (i.e., 95 percent of the AAPCC) to the costs that would have been incurred had they not enrolled. This analysis was hindered by the fact that average reimbursements computed from HCFA claims data and from published county level HCFA data are considerably lower than the values implied by the county AAPCC values.[1] This discrepancy introduced some uncertainty about whether the claims data were fully capturing Medicare costs. To deal with this problem, two alternative sets of impact estimates were pursued. First, it was assumed that the discrepancy between the claims data and the AAPCC is due entirely to the fact that the AAPCC overestimates costs. Under this assumption, it was estimated that HCFA's payments for enrollees during the period studied were 50 to 74 percent higher than the costs that would have been incurred had enrollees remained in the fee-for-service sector.

[1]HCFA claims data do not include the hospital capital costs "pass through" nor the periodic reconciliations that are included in full Medicare costs. However, these two adjustments do not fully account for the discrepancy observed. The analysis reported here did include an adjustment for pass-through costs and the results reflect that adjustment.

The alternative assumption was that the AAPCC values were accurate and that the impact of risk contracting on HCFA's costs depended exclusively on the adequacy of the risk factors to control for biased selection. Under this more conservative assumption, it was estimated that during the period studied, HCFA paid 15 to 33 percent more for beneficiaries enrolled in risk HMOs than would have been paid had those enrollees remained in the fee-for-service sector.

The evidence strongly suggests that risk contracts with HMOs that participated in the Medicare Competition Demonstrations resulted in higher Medicare program costs than would have occurred in the absence of risk contracting. However, the discrepancy between the HCFA claims data and county AAPCC levels must be accounted for before any firm conclusions can be drawn about the magnitude and extent of the impact of risk contracting on Medicare costs.

D. DISCUSSION

Results of the analyses of the impacts of the Medicare Competition Demonstrations on the use and costs of services by Medicare beneficiaries who enrolled in these plans suggest several conclusions:

- HMOs were initially very conservative in their estimates of the hospital days per beneficiary that would be experienced for the Medicare population. Most estimated substantially higher use rates than were actually experienced.

- Over the initial three years that these demonstration HMOs operated in the Medicare market, there was a small, but consistent pattern of declining hospital use rates for their Medicare enrollment. This pattern may reflect the HMOs' increasing experience in managing care for an elderly population or may be the result of beneficiaries' initial high use of services to compensate for underservice prior to joining the HMO,

due to financial or other access barriers. It may also be the result of the disenrollment of higher-use profile Medicare beneficiaries, which has been documented in the biased selection study, leaving a healthier mix of enrollees than were initially observed.

- The results of the analysis of biased selection provide strong evidence that the demonstration HMOs experienced substantial favorable selection in enrollment. The extent of favorable selection appears to have been greater for Group and Staff Model HMOs than for IPAs and Mixed Model HMOs, but evidence of favorable selection is present even for several of these latter plans.

- The analysis of the impact of the Medicare Competition Demonstrations on service use indicates that HMOs and CMPs had little or no effect on hospital use in the first year that they served the Medicare population but, by the second year, there was a measurable and significant reduction in the use of hospital services. Higher SNF use patterns observed for the post-enrollment period enrollees suggests that HMOs are, to some extent, successful in substituting SNF services for more costly hospital days.

- The results of the evaluation of the impact of the Medicare Competition Demonstrations on costs to the Medicare program indicate that risk contracting may have increased Medicare program costs. The magnitude of these excess costs range from 15 to 74 percent, under alternative assumptions. However, data discrepancies were identified that make it uncertain whether these results are accurate representations of the impact.

Although these findings suggest that the Medicare Competition Demonstrations quite possibly have been associated with higher costs to the Medicare program than would have been incurred under the fee-for-service system, it is not clear that these results can be fully generalized to the current TEFRA program. The Medicare Competition Demonstrations HMOs and CMPs are not representative of the HMO industry in a number of ways. The composition of the demonstration HMOs is disproportionately Group and Staff Model HMOs, both of which have been more likely to experience significant favorable selection than other types of HMOs. In addition, the willingness

of these HMOs and CMPs to participate in a demonstration program may indicate that some systematic differences exist between these HMOs and those that chose to enter later, after the Medicare program had refined the capitation rules and more experience had been gained. It is also possible that beneficiaries who elected to join an HMO under a demonstration status --rather than after the permanent, ongoing program was in place--are different, in ways that are related to their propensity to use health services, from Medicare beneficiaries who joined subsequently. We anticipate that the comprehensive evaluation of the ongoing TEFRA program will provide answers to these issues.

VII. COMPETITION[1]

A. OVERVIEW

A fundamental objective of the Medicare Competition Demonstration initiative was to introduce competition into the Medicare sector of the health care market and to determine the effects of that increase in competition. This pro-competitive strategy required that Medicare beneficiaries be offered choices, that insurers and health care providers be free to compete on the basis of price, quality, and amenities without undue government involvement, and that sufficient information be available to permit beneficiaries to make rational choices among the alternatives. Several major evaluation approaches to assessing competitive effects were taken:

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[1]The research summarized in Chapter VII is drawn from the following sources:

Langwell, K., et al. Report on the Implementation of the Medicare Competition Demonstrations, February 1986.

Rossiter, L.F., A. Friedlob, and K. Langwell. "Exploring Benefits of Risk-Based Contracting Under Medicare," Healthcare Financial Management, May 1985.

Rossiter, L.F., et al. Report on Satisfaction of Enrollees and Disenrollees of Medicare Competition Demonstration HMOs and CMPs, May 1988.

Adamache, K. and L.F. Rossiter. "The Entry of HMOs into the Medicare Market: Implications for TEFRA's Mandate," Inquiry 23 (Winter 1987).

Rossiter, L.F. Report on Impacts of the Medicare Competition Demonstrations on the Fee-for-Service Sector, August 1988.

- Identifying the factors that are associated with the decision of HMOs to enter the Medicare market on a risk basis;
- Examining the response of the fee-for-service sector to the introduction of new, competing health care systems into the Medicare market;
- Assessing the nature, extent, and implications of competition among HMOs for Medicare enrollees.

The expansion of the number of HMOs into the Medicare market under the TEFRA program introduced even more competition into this market than had been assumed would exist under the limited demonstration program that was the focus of the Medicare Competition Demonstrations Evaluation. The results of the evaluation of the competitive effects of the demonstration program may well provide insight into the implications of the TEFRA program for competition in the longer run.

In this chapter, we summarize the findings of the evaluation of competitive effects among HMOs and between HMOs and the fee-for-service sector.

B. MARKET ENTRY OF HMOs AND CMPs

Under the Medicare Competition Demonstration program, HMOs and CMPs were invited to apply to participate and then, subsequently, HCFA screening resulted in the selection of 26 to serve as demonstrations. The evaluation of the behavior of HMOs when offered the opportunity to join the demonstration was examined by Adamache and Rossiter (1985). They found that HMOs that applied to enter the Medicare market under the Medicare Competition Demonstrations were no different from the population of HMOs eligible for entry into the market. Using data on a census of HMOs operating in 1982, this study performed a probit analysis of market entry

with a binary dependent variable for each HMO observation set equal to 1 for risk-based Medicare demonstration applicants and 0 otherwise. Market characteristics were hypothesized to influence the market entry decision, including the AAPCC level, the share of the population age 65 years or older, and the share of female elderly.

Organizational characteristics such as prior Medicare experience (through a cost contract) and Federal qualification were also hypothesized to influence market entry. The HMO's financial experience and cost in the non-Medicare market were also included as independent variables. The most consistent effect of market entry was found to be the level of the AAPCC. HMOs in high AAPCC areas were more likely to enter the market. No association was found between entry into the risk-based Medicare market and profit status, HMO enrollment size, hospital ownership status, years of operational experience, or HMO model type. The results suggested that policymakers need not be concerned that inexperienced or special types of HMOs were entering the Medicare market at risk under the demonstration program.

Since the time of the Adamache and Rossiter study, the number of HMOs and CMPs that have applied and entered the Medicare market under TEFRA has increased dramatically and the total number of HMOs and CMPs in the United States has nearly doubled. Moreover, the process by which an HMO decided to enter the market under the ongoing TEFRA program may be different from that used to decide whether to be part of the demonstration. The principal difference may be that those that entered the market as demonstrations may have been more aggressive, more willing to take risks, or may have had the most progressive management. HMOs have now had

several years of experience in the risk-based Medicare market, and the perceptions of risk and benefits of contracting with HCFA may have changed. While over 150 HMOs and CMPs have applied and, for some period, operated in the Medicare market under risk contracts, the relatively large number of nonrenewals of risk contracts at the end of 1987 suggests that the HMO industry may be re-assessing the terms and conditions of participation in the Medicare market.

C. RESPONSES TO THE INTRODUCTION OF COMPETITION INTO THE MEDICARE MARKET

The competitive effect of HMO entry into the Medicare market on a risk contract basis is an important and interesting issue. Due to the data limitations and to the very preliminary effects that were expected during the earliest years of HMO involvement in the Medicare market, it was not possible to conduct a comprehensive quantitive evaluation of competitive impacts. However, two studies that provide initial insight into this issue have been pursued: (1) a case study of the initial responses of providers to HMO market entry; and (2) an evaluation of the effect of competition on the use and costs of services by Medicare beneficiaries in the fee-for-service sector.

1. Case Study of Competitive Responses

To obtain information on the competitive behavior of HMOs entering the Medicare market and on the responses of fee-for-service insurers and providers, site visits to 20 of the Medicare Competition Demonstration HMOs were conducted approximately 6 months after the demonstration had begun. A principal objective during these site visits was to learn about strategic planning of the HMOs and about counter-strategies of providers in these

markets. In addition to interviewing a variety of management and marketing personnel in the demonstration HMOs, the site visit teams also met with representatives from the local area medical society, hospital association, health care coalition, and newspaper staff assigned to cover health issues.

The case study results indicated that strategic planning by the Medicare demonstration HMOs was heavily conditioned by the competitive environment in which they operated. The dominant strategy for successful entry into the Medicare market was to offer the set of benefits available to Medicare beneficiaries under traditional Medicare supplemental insurance at a premium notably lower than that charged by the traditional insurer. The following are examples of the differences in initial premiums offered by the demonstration HMOs and traditional insurers:

- One HMO offered somewhat expanded benefits and reduced cost sharing for a monthly premium of $28.60--compared with a $46 monthly premium charged by the market's major supplemental insurer.
- One HMO offered to the Medicare beneficiary the same benefits as the principal Medicare supplemental insurer--without charging a premium.
- One HMO offered an expanded set of benefits (high-option) for a premium of $39 per month--compared with $70 per month for high-option Medicare supplemental policies in this market.
- One HMO offered at a lower premium a package of benefits identical to those offered by the local principal Medicare supplemental insurer--adding a no-copayment prescription drug benefit.

Blue Cross and Blue Shield Medicare supplemental policies were cited by all demonstration managers as the primary competition facing the HMO. These demonstration managers also noted that being the initial HMO entrant into the Medicare market was a valuable consideration in their long-run strategic position in the Medicare market.

Strategic planning for product development was quite different for those demonstration HMOs in more competitive markets--particularly for those that were not among the first HMOs to enter the Medicare market under the demonstration. For example, one IPA HMO entered the Medicare market nearly a year later than a well-established Group Model HMO affiliated with the local Blue Cross plan. Thus, in determining its product design, the new market entrant considered the products offered by both the established HMO and by Blue Cross supplemental insurance. For a comparable set of benefits, the IPA charged a premium lower than the principal Medicare supplement insurer, but higher than that charged by the Group Model HMO. The IPA management expected to compete effectively with the Group Model HMO by stressing the IPA advantages of a wider choice of physicians and service locations.

The response of fee-for-service providers to the entry of HMOs into the Medicare market was also documented through the case study. This response ranged from overt and organized efforts to combat the new alternative health plans, in order to keep Medicare beneficiaries in the fee-for-service sector, to relative indifference. In South Florida, for example, where the percentage of the population eligible for Medicare is 50 percent higher than the national average, certain hospitals initially refused to accept Medicare HMO enrollees on other than an emergency basis. Fee-for-service physicians organized to produce promotional materials that compared fee-for-service care with HMO care on a number of dimensions, with particular emphasis on the HMO "lock-in" and lack of coverage outside the immediate market area. In other areas of the country, however, there appeared to be little organized response on the part of the

fee-for-service sector--perhaps because at the time of the early demonstration period, the degree of market penetration achieved by the demonstration HMOs was still relatively small in most geographic locations. Over time, and with the expansion of Medicare risk contracting under TEFRA, it seems likely that greater responses from the fee-for-service sector may occur.

Two factors may affect the extent of the response by the fee-for-service provider however: (1) a majority of HMOs in the Medicare market contract with fee-for-service physicians, and (2) a relatively high proportion of Medicare HMO enrollees--23 percent, overall--were "rollovers" whose primary physician contracted with an HMO thus "sparing" them from having to change primary care physicians. The percent of rollovers among the Medicare Competition Demonstration HMOs ranged from 62.8 percent in one IPA down to 1.7 percent in one Staff Model HMO. In addition, 23.5 percent of all demonstration HMO enrollees reported that they had no prior regular physician before joining the HMO. Consequently, from the fee-for-service physician's perspective, the impact of HMO competition for Medicare patients on patient loads may be considerably smaller than market penetration rates suggest. Results from the analyses of disenrollment patterns from the demonstration HMOs provides further support for this perspective. Nearly 20 percent of disenrollees interviewed stated that they had disenrolled either because they had not understood that it would be necessary for them to change physicians or because their physician had left the HMO.

The impact of Medicare HMO competition on traditional Medicare supplemental insurers is similarly modified by HMO enrollees behavior in

the insurance market. Analysis of survey data collected from beneficiaries over a year after enrollment in an HMO indicates that approximately one of three previously insured HMO enrollees had continued to maintain that insurance while enrolled in the HMO. While some (23 percent) retained insurance because they received it as a retirement benefit without any direct cost to them, nearly 20 percent indicated that they maintained the coverage because they were uncertain about staying with the HMO or because they thought it was worth paying the premium in order to have the security of extra coverage. Since 36 percent of HMO enrollees did not have Medicare supplemental insurance before joining an HMO and another 21 percent continue their insurance after joining, the impact on the Medicare supplemental insurance market is considerably less than it would appear from examining market penetration rates for Medicare HMOs.

2. Effects on Use and Costs of Services in the Fee-For-Service Sector

One potential competitive effect that Medicare HMOs may have on the fee-for-service sector is to change the style of care practiced by fee-for service providers. This effect may occur for several reasons:

1. Fee-for-service physicians may recognize that Medicare beneficiaries are joining HMOs primarily because they hope to incur lower out-of-pocket costs. Physicians who are concerned about losing patients to HMOs may respond by changing their practice style to emphasize use of services that are less costly to Medicare beneficiaries.

2. As HMOs achieve greater market penetration, the HMO may expand by adding new fee-for-service physicians to their network. These physicians will retain considerable fee-for-service practice but will be subject to the HMO's rules for their capitated patients. As the proportion of a physician's patients that are HMO members increases, the physician may be

influenced to change his/her practice style for all patients, rather than maintain a two-tier practice.

3. Hospitals that have contractual arrangements with HMOs that direct a substantial number of patients to the hospital may change their overall admissions and discharge process, as well as cost accounting approach, in ways that affect non-HMO payers and patients.

In order to assess the effect of increased competition in the Medicare market on use and costs of services by nonenrolled Medicare beneficiaries, changes over the demonstration period in use patterns and in Medicare Part A and Part B reimbursements were examined for Medicare beneficiaries in external comparison sites and for Medicare beneficiaries in the fee-for-service system in the demonstration market areas. These comparisons were drawn for--

- hospital days per 1,000 beneficiaries,
- hospital admissions per 1,000 beneficiaries,
- Part A reimbursements per beneficiary, and
- Part B reimbursements per beneficiary.

Of interest was whether there were differences in the patterns of change between 1985 and 1986 in the demonstration and comparison sites.

While there was some indication that HMO presence in the Medicare market was associated with lower hospital admission rates in the fee-for-service sector, the observed higher decline in admissions in the demonstration sites was not associated with Part A cost impacts. No patterns were observed for the use and costs of physicians' services in HMO markets and comparison markets over the period of the study. Overall, once the characteristics of enrollees and markets are controlled for, no

differences between the demonstration and comparison sites in terms of patterns of use and costs were detected.

Despite the absence of evidence on the competitive effect of the Medicare HMO demonstrations on fee-for-service use and costs patterns, more research over a longer period of time is probably warranted. By the latter half of the study period, the comparison sites were not true comparison sites, since the TEFRA rules had been announced, and a large number of HMOs--many in these comparison sites--had entered the Medicare market. In addition, the effect of competition may be felt more widely than in the Medicare market. In both the demonstration and comparison sites, HMOs had been operating in the non-Medicare market for varying periods of time; thus, competitive effects may have been occurring all along and were not specifically focused on the entry of HMOs into the Medicare market. Finally, it seems highly probable that the effect of competition on use and costs of services will not be fully worked through the health care market within a two-year period. It is possible that, over a longer time, impacts may well occur and be measurable.

D. COMPETITION AMONG HMOs

The Medicare Competition Demonstrations Evaluation was able to follow the development and competitive strategies of the demonstration HMOs from their initial start-up between 1982 and 1984, through the shift to TEFRA program status in early 1985, and into the more intensely competitive period of 1986 when over 150 HMOs were actively participating in the Medicare market on a risk basis under TEFRA rules. Observations from these three years of experience provides considerable insight into the nature and direction of competition among HMOs in the Medicare market.

Examination of the 1984 full-year experience of the Medicare demonstration HMOs indicated that competition in the initial period concentrated on marketing to beneficiaries with Medicare supplemental insurance and drawing them away from local insurance companies. However, because joining an HMO often means breaking existing physician ties, there was a perception among these HMOs that the pool of receptive beneficiaries was initially small. Consequently, the demonstration HMOs were competing with each other for that segment of the market that was either dissatisfied with the fee-for-service sector, had no existing ties to providers, or viewed the benefit package and premium as an attractive alternative. All the HMOs in multiple HMO markets reported significant competitive interaction and market awareness among competing plans by year end 1984.

A year later, at the end of 1985, the competitive environment had changed significantly with the expansion of Medicare risk-contracting under the permanent TEFRA program rules. All of the demonstration HMOs had converted to program status during 1985. They reported substantial changes in premiums, benefits, and copayments in response to TEFRA regulations, changes in the AAPCC, and the increased competition of new HMOs entering the market. By the end of 1986, the 24 continuing HMOs had been operating in the Medicare market for approximately three years. In that third year, 4 of the 24 decreased their premiums for the Medicare package and 13 held their premium constant. At the same time, 9 of the 24 increased benefits and/or reduced copayments for existing benefits. These changes, for the most part, can be interpreted as strategic in nature--increasing the marketability of the Medicare product or responding to comparable changes in Medicare packages being offered by competing HMOs.

Another strong indicator of the extent of competition among Medicare HMOs is disenrollment due to HMO switching, rather than to a return to fee-for-service arrangements. Evidence from disenrollment studies conducted under the Evaluation indicates that, while disenrollment has been relatively high, a substantial proportion of that disenrollment is due to Medicare beneficiaries' switching their membership from one HMO to another in order to improve their benefits, reduce premiums, stay with a specific physician, or for other reasons. Over a 24-month enrollment period, switching was responsible for one-third of total disenrollment.

An interesting case in point is an HMO in a multiple Medicare HMO market area that experienced a disenrollment rate of only 5 percent in 1984 and 1985, but lost 60 percent of its members in 1986 as new HMOs entered the market offering highly competitive benefit packages and lower premiums. While this is a particularly striking example, there seems no doubt that there is competition among Medicare HMOs. The Evaluation of the Medicare Competition Demonstrations was unable to fully document this competition because it was not possible under the scope of the evaluation to obtain information on marketing strategies and product characteristics of all the new HMOs that entered the market after the TEFRA regulations went into effect in 1985. However, the limited evidence available on competition among the original demonstration HMOs makes it clear that this is a potentially interesting and worthwhile area for future research.

E. DISCUSSION

There appears to be little doubt that the Medicare Competition Demonstrations were operating in highly competitive markets, in many geographic locations. The anecdotal evidence and the case study results

support a view that providers in some market areas attempted to influence Medicare beneficiaries' decisions to join HMOs. However, the fact that a high percentage of HMO enrollees had no regular physician or were "rollovers," who could join the HMO without changing physician, suggests that the full impact of increasing market penetration of HMOs has not yet been felt.

Results of the quantitative analysis to address competitive effects found that the entry of the demonstration HMOs into the Medicare market had no measurable impact on the style of care practiced by fee-for-service physicians in the demonstration markets. However, because the study took place over a relatively short time period and the evaluation results were compromised by the entry of new, competing HMOs under the TEFRA regulations, further research on this issue may be warranted.

Competition among the HMOs operating in the Medicare market, on the other hand, appears to be clearly documented. Strategic planning and market positioning, initially and over the three years that these HMOs were followed, was focused on both the fee-for-service sector and on HMO competition. Changes in benefits, premiums, and copayments were often designed within a framework of the packages offered by other Medicare HMOs --particularly since there was a perception that the Medicare HMOs were competing for enrollments from among only that small percentage of Medicare beneficiaries who would consider joining an HMO.

That HMOs were indeed competing among each other was borne out to some extent by the patterns of disenrollment that occurred over time. While, initially, a very small proportion of Medicare HMO disenrollees re-enrolled in another HMO, by the third year of the evaluation a higher

proportion (25 percent) of disenrollees were joining other HMOs, rather than returning to the fee-for-service sector.

The longer-run impacts of increased competition in the Medicare market may take several years to occur. However, the initial anecdotal and quantitative evidence suggests that there will indeed be competitive effects. It is not clear at present what the nature and implications of those effects will be or how they will affect the Medicare program, beneficiaries, or the HMO industry as a whole.

VIII. SUMMARY AND DISCUSSION

The Medicare Competition Demonstrations were initiated in 1982 to provide information to the Health Care Financing Administration on the feasibility and impacts of risk contracting with HMOs on behalf of Medicare beneficiaries who voluntarily enroll. In January 1985, while the demonstration program was in an early stage, the final TEFRA regulations were issued by the Department of Health and Human Services to permit all qualified HMOs to enroll and serve Medicare beneficiaries. Despite the termination of the demonstrations by mid-1985, the National Evaluation of the Medicare Competition Demonstrations continued with the cooperation of the demonstration HMOs that had converted to permanent program status under the TEFRA regulations. Consequently, the evaluation was able to focus on the performance and impacts of HMOs under demonstration and program status over the 1984 through 1986 period.

The results of the evaluation provide useful information for refinement of the TEFRA HMO program, as well as findings of interest to the research community. The key conclusions from this evaluation include:

1. Risk contracting is operationally feasible and HMOs have been successful in marketing to Medicare beneficiaries. By mid-1988, over 1 million Medicare beneficiaries were enrolled in over 130 Medicare HMOs and CMPs.

2. HMOs are more likely to appeal to Medicare beneficiaries who are low income but not Medicaid eligible, do not have Medicare supplemental insurance, and do not have a regular source of care before joining the HMO. These enrollees may have faced significant financial barriers to access to health services and these barriers were reduced by the availability of the HMO option.

3. HMO enrollees and Medicare beneficiaries who do not enroll in HMOs indicate comparable levels of overall satisfaction with their health care arrangements, although HMO enrollees reported less satisfaction with specific elements related to the perceived quality of care they received at the HMO.

4. Disenrollment from Medicare HMOs is high -- approximately 30 percent of beneficiaries disenroll within two years. Disenrollment was most frequent from Staff Model HMOs and disenrollees were more likely than were continuing enrollees to have characteristics associated with a higher propensity to use health services.

5. The process of care provided in HMOs is not significantly different, or is somewhat better, than the care provided in fee-for-service settings. This finding holds for basic care, management of chronic conditions, and management of resource intensive conditions. In addition, Medicare beneficiaries in HMOs report access to care that is quite similar to fee-for-service patients, for specific symptoms.

6. Selection into HMOs was notably favorable during the demonstration period. Medicare beneficiaries who enrolled in HMOs had used significantly less health care in the two years prior to joining the HMO and were significantly less likely to die during the two years following enrollment.

7. Medicare HMOs had little impact on Medicare enrollees' use of hospital services during the initial enrollment year. During the second year, however, there was a measurable and significant reduction in use of hospital services by these enrollees. This finding may reflect HMOs' learning to manage older patients' care or may be the result of enrollees' having had untreated conditions prior to joining the HMO.

8. Although discrepancies in the Medicare claims data create uncertainty about the validity of the results of the cost impact evaluation, there was considerable evidence that suggests that Medicare program costs were increased as a result of risk contracting with the Medicare Competition Demonstration HMOs and CMPs.

Overall, the National Evaluation of the Medicare Competition Demonstrations provides evidence that Medicare risk contracting is operationally feasible

and most HMOs and CMPs have been operating successfully in the Medicare market. Medicare enrollees are satisfied and some beneficiaries may have improved access to care of equal or higher quality than is available in the fee-for-service sector. It is less clear that the Medicare program has achieved any savings from the risk contracting experience with the demonstration HMOs and CMPs. However, the demonstration HMOs and CMPs are not representative of the HMO industry or of TEFRA risk contract HMOs in a number of ways and, consequently, these results may not be fully generalizable to the current TEFRA program. The evaluation findings do point the way for future directions for research and HCFA's evaluation of the TEFRA HMO/CMP program, which began in early 1988 and will continue through 1992, will be conducted based on the solid foundation of information and research methodology provided by the National Evaluation of the Medicare Competition Demonstrations.

APPENDIX

APPENDIX

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